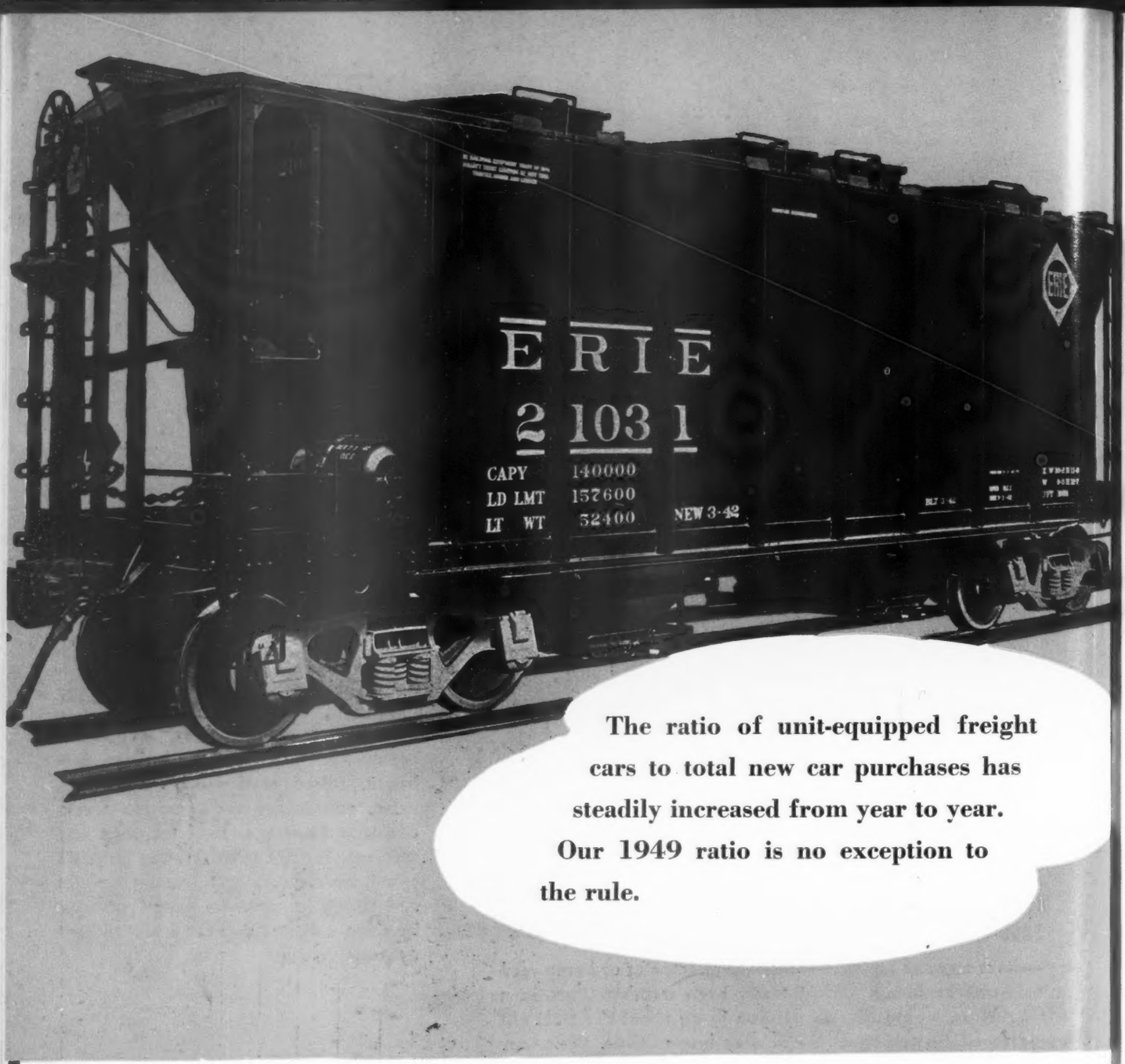
FOUNDED IN 1856

RAILWAY AGE

DECEMBER 10, 1949



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to our railroad friends

— everywhere.

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Vol. 127, No. 24 December 10, 1949

RAILWAY AGE

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IN THIS ISSUE

EDITORIALS:

GENERAL ARTICLES:

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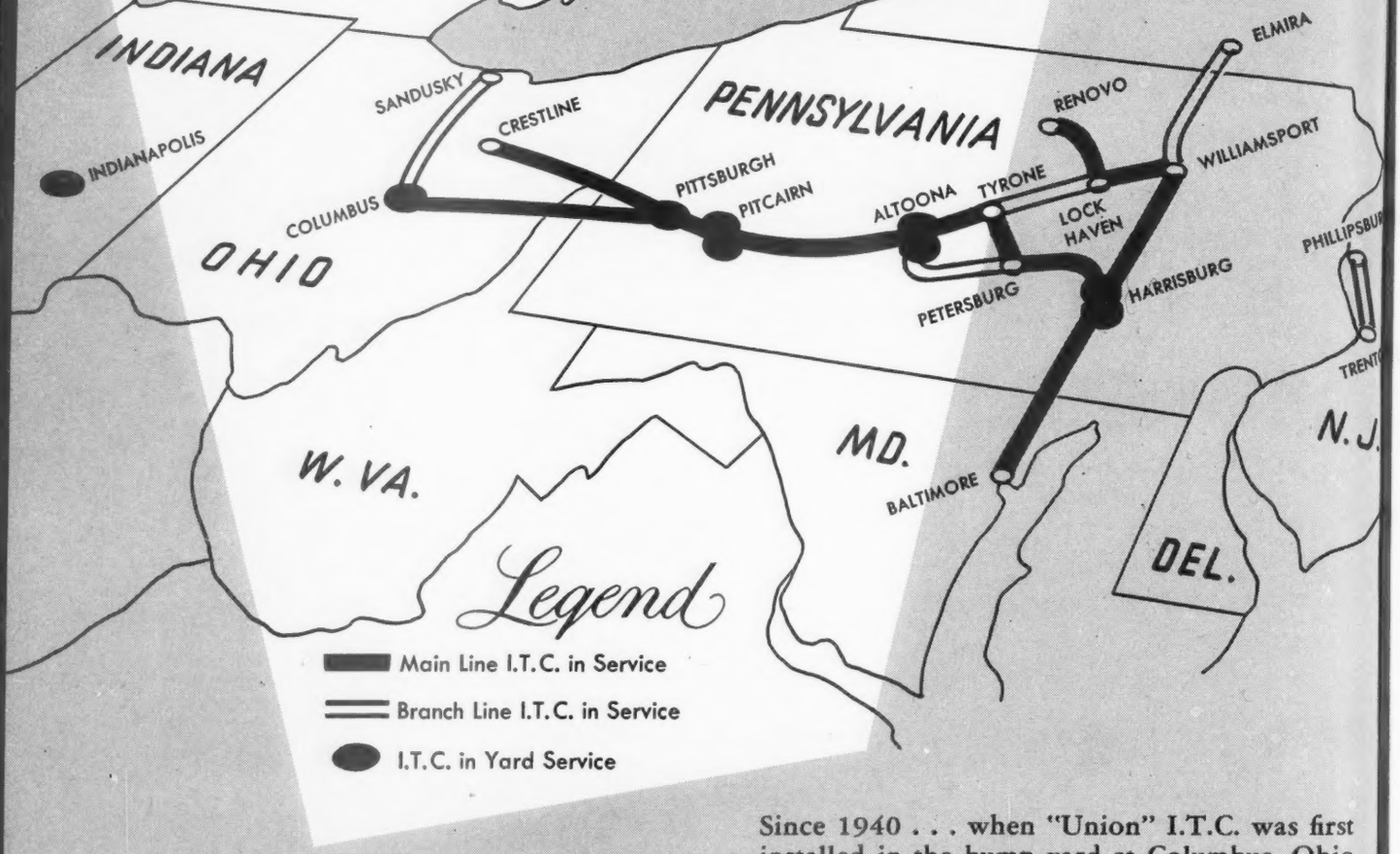

The Pennsylvania Railroad now has "Union" Inductive Train Communication in service on 860 miles of main line, 348 miles of branch line, and in 9 yard installations. Equipment has been installed on a total of 613 locomotives, 130 cabin cars, and at 66 wayside stations.

Certainly, this is ample evidence of the dependability and efficiency of "Union" I.T.C. Since 1940 . . . when "Union" I.T.C. was first installed in the hump yard at Columbus, Ohio . . . the Pennsylvania has continually extended its use because I.T.C. meets their needs. And each of the many installations has proved to be a profitable investment.

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WEEK AT A GLANCE

TO ICE A REEFER—90 SECONDS: Intensive truck competition for valuable perishable freight puts it squarely up to the railroads to move that freight in the shortest possible time, and in the most efficient possible manner; proper icing of cars, rapidly and cheaply, is an important element in such movement. In that element, at least, the Santa Fe appears to have reached the ultimate at Bakersfield, Cal., by its installation of three Rico platform icers, built by the Link Belt Company. The machines are illustrated, and their operation described, in the article which begins on page 46.

THE SOUTHERN KEEPS IT MOVING: L. c. l. freight, no less than perishable, is peculiarly sensitive to truck competition—because, in all frankness, railroad l.c.l. business is all too often delayed at transfer points. To overcome such delays, the Southern is eliminating auxiliary transfer points; is concentrating all such operations at six major transfers, operated on a seven-day basis; and is establishing additional car lines and loading more solid cars. The results, J. R. Formby, the Southern's manager of stations and transfers, points out on page 50, are winning favorable reaction from the road's customers. Mr. Formby makes a couple of other pretty cogent points—that l.c.l. transfer agencies, concerned with *movement* of freight, should not be thought of as stations; and that railroad l.c.l. business has suffered from a vicious circle of diversion to trucks leading to deterioration in service for remaining business, with such deterioration, in turn, leading to further diversion.

BETTER SERVICE FOR R. I. COMMUTERS: With Diesel power, new and rebuilt cars and stations, and other improvements, the Chicago, Rock Island & Pacific is doing its best to give its Chicago commuters considerably more than their money's worth. And the improved service was introduced with a practical program of applied public relations intended to show the customers just what a bargain they are getting, and what it costs the railroad to give it to them. The story of the new service, and its public debut, are told on page 52.

UNDER-CAR ELECTRIC PLANT: On page 59 is a brief description of the installation, on the Rock Island's "Peoria Rocket," of a Waukesha Enginator, which provides the train with an additional source of electric lighting and air-conditioning power, not dependent on car movement, to avoid excessive drain on storage batteries.

SEPTEMBER PURCHASES: Class I railroads in September spent just a little less than $122 million for fuel, equipment, and materials and supplies. The detailed figures, on pages 63 and 64, show that rail and ties were purchased in considerably larger volume in the first nine months of 1949 than in the corresponding period last year; and that total inventories have been declining since April 1 at the rate of more than $15 million per month.

CHRISTMAS PRESENT: As a Christmas present to its patrons, the Norfolk & Western will place in service on December 12 two completely new sets of lightweight, ultra-modern car equipment for its steam-powered, streamlined, all-coach Norfolk-Cincinnati "Powhatan Arrow." The 20 cars included in the new consists, built by Pullman-Standard, are described and illustrated in the article which begins on page 54.

REPARATIONS CASES: The railroads and their supporting interveners completed last Monday their testimony to the I.C.C. in five of the 17 so-called reparations cases. March 20 has been set as the date for the next hearing—to receive rebuttal evidence from the government. Testimony submitted since last week's *Railway Age* went to press is reported on pages 60 et seq.

GAS TURBINE TESTS: Presidents of nine railroads this week saw a locomotive-size gas turbine operate with pulverized coal as fuel. While it is "premature," B. & O. President R. B. White said, to assume that all technical problems have been solved, the tests did show that bituminous coal can operate a gas turbine. See News pages.

EFFECT OF STRIKES: The effect on the railroads of the coal and steel strikes shows up vividly in the News section of report of October earnings—net income after charges was down to $24 million, against $85 million in the same month a year ago. The eastern railroads, hardest hit by the labor troubles, reported a $10 million net deficit.

THE ODOR PENETRATES: In the News section is a report of a successful New York Central test of a hot box alarm, which releases a "penetrating and unpleasant odor" readily recognizable inside cars.

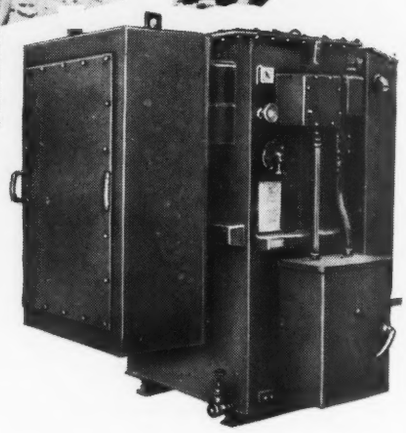
FREEDOM VS. SOCIALISM: The most dangerous promoters of socialism in the United States, our leading editorial declares, are those who profess to oppose socialism in theory but who advocate and practice it for their own benefit, e.g., the commercial users of the country's already socialized network of airways, highways and "improved" waterways. "There is only one way," the editorial concludes, "to oppose socialism successfully, and that is to oppose and attack every socialistic policy, regardless of whom it may apparently benefit temporarily." Such opposition can't rely on talk alone, but requires positive action—political action.

for the Cincinnati Union Terminal...

better STATION STANDBY facilities

...serviced by OKONITE cables

Flexible cables from standby power outlets supplying 240 volts a-c to air conditioning units of coaches in station.



One of the 16 power transformer substations fed by 13,200 volt Okolite-Okoprene underground cable.

To meet the growing needs of its seven tenant roads, the Cincinnati Union Terminal Company recently completed a newly-electrified system of yard and station service facilities. Prominent among these is the high-capacity, well-protected network of transformers and outlets along the station tracks to supply standby power for charging batteries and pre-cooling passenger coaches. 36,000 feet of Okonite underground cables—dependable and long-lived under even the most severe conditions—feed the transformers and link the power outlets.

Extending along each side of the 20-track station are opposite rows of eight power transformer stations, each row connected by Okolite-Okoprene 13,200-volt primary feeder cables. Secondary feeder cables, also of Okonite manufacture, are run at right angles to the tracks, each circuit running across ten tracks only, to reduce the voltage drop. These cables connect with the standby power outlets spaced at 80-foot intervals alongside the tracks, from which 50-foot lengths of heavy-duty portable cables are used to connect with cars. Pre-cooling and charging can be carried on either separately or simultaneously.

Again, unusual installations have a way of turning out to be Okonite installations. For there is a wide range of Okonite wires and cables—for underground, overhead or submarine service—specially designed for railroad use. And long, trouble-free life is the true measure of cable performance and economy, especially in these days of high installation costs. Whatever your wiring or cable problems may be, consult an Okonite engineer or write to The Okonite Company, Passaic, New Jersey.

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FIGHTING FOR FREEDOM VERSUS SOCIALISM

The most important facts the American people need to learn now are that:

(1) Socialism is the only important issue confronting them; all other current issues are merely parts of the issue of socialism, (2) The issue of socialism can be settled only in politics, (3) It can be fought out in politics only if there is a major political party willing to fight every socialistic policy and every candidate who favors any such policy, (4) There is at present no major political party which is willing to fight all socialistic policies, (5) Therefore, if socialism is going to be beaten those who are opposed to it must take firm control and leadership of an existing major political party or organize themselves into a new major political party under the ablest leadership available.

The writer of this editorial attended a great "Freedom Dinner" in Chicago on the evening of November 30. It was given under the sponsorship of the Transportation Association of America. It was attended by about 1,400 leaders of agriculture, business and finance, and is intended to be the first of many similar meetings, large and small, throughout the country. Some able addresses attacking the government policies dragging the nation more and more rapidly down toward socialism were delivered by some important men, including the president of a large state farm bureau federation, the chairman of a large oil company, a vice-president of a great bank, and the executive vice-president of the Transportation Association. The addresses were excellent; they said what this paper has been saying for more than a third of a century — viz., that to stop the trend toward socialism it is necessary to abolish and oppose *every* socialistic policy — a sentiment apparently approved and applauded by everybody present.

Socialization Began in Transportation

The reason why *Railway Age* began preaching this doctrine long ago, and before almost anybody else, is that socialization in this country began in the transportation industry — first, by regulation to restrict railway profits, and second, by government subsidization of transportation competing with the railways. And the rapid socialization of transportation has not been principally due to those groups that businessmen now denounce for promoting socialism. It has been principally due to businessmen themselves. In the great audience at the "Freedom Dinner" in Chicago there were many who found it convenient to forget that they promoted the policies by which the railways have been shackled and their competitors subsidized, and that they have gladly accepted and still gladly accept the benefits of those policies; and there were few present who have opposed those policies or will even now join in out-

spokenly and actively advocating their abolition. The attitude of most of the businessmen of this country has been and still is the same as the attitude of most of those who attended the "Freedom Dinner." Certainly, they are opposed to socialism—but they have wanted and still want all the socialism that they believe benefits or will benefit them!

It should have been plain always, and should be plainer now than ever, to every thinking person, that nobody ever has or ever will oppose total socialism effectively who, while professing to oppose it, proves himself a hypocrite by promoting and taking every possible advantage of specific socialistic policies.

Complete socialism is government ownership and management of the means of production, distribution and exchange. Our railways are privately owned and managed and pay all their costs out of their own earnings. Our inland waterways, highways, and the airports and other lighting and fixed facilities used by the air lines are government owned and maintained. The total investment of the taxpayers' money in the government-owned facilities used by water, highway and air carriers now exceeds the *private* investment in the railways, including both their fixed properties and equipment. Most carriers besides the railways have little or no investment excepting in their equipment — boats, trucks, buses and airplanes. Hence, most of the property now used in transportation is government owned — i.e., socialized.

Socialistic Institutions

If all those using government property for transportation paid enough for its use to reimburse the taxpayers what it costs the taxpayers to provide it for their use, they could not be said to be engaged in "socialized transportation." But some of them — i.e., carriers by inland waterway — pay nothing for their use of government property; others — i.e., intercity carriers by highway — pay less than their use of it costs; others — i.e., carriers by air — not only pay inadequately or nothing for their use of government property, but are actually paid subsidies by government for using their equipment, as for carrying the mail.

Hence, in a large or smaller measure, all carriers. excepting railroads and pipelines, are as essentially socialistic institutions as would be government-owned and operated railroads.

And, what is worse, by being allowed to use government property at no cost or less than cost to themselves, these socialistic carriers are being enabled to take traffic from the railways and prevent the railways from charging remunerative rates, and thereby to drag the railways down toward government ownership. No other single thing which could occur would advance socialism so much in this country as adoption of government ownership of railways. And no other great American industry is so closely approaching imminent danger of government ownership as the railways.

So the best test that can be presently applied to the sincerity of businessmen who meet and make and applaud speeches for freedom and against socialism is whether they will willingly forego the advantages they now derive and seek from socialism in transportation and go out and fight for its abolition. Few businessmen or business organizations can come into court against socialism with clean hands.

When did any of their national organizations ever oppose *all* government-subsidized competition in transportation as well as in other industries? When did the National Association of Manufacturers ever do so? When did the Chamber of Commerce of the United States ever do so. Never. Why? Because the socialistic businessmen receiving and seeking subsidies have always had so much more influence in those and other business organizations than the sincere opponents of socialism. If men in other professions and industries will not oppose socialism in transportation, but persist in selfishly promoting it, how do they expect to marshal effective opposition to socialized medicine, socialized housing, socialization of the steel industry, or complete socialism?

Those who profess to oppose socialism but advocate and practice it for their own benefit always have been and still are the most dangerous promoters of socialism and have helped to cause the adoption of most socialistic policies now in effect in this country. There is only one way to oppose socialism successfully and that is to *oppose and attack every socialistic policy,* regardless of whom it may apparently benefit temporarily; for, in the long run, every socialistic policy injures everybody and if we get complete socialism it will be due to the success of selfish pressure groups of business, labor and agriculture in securing adoption of socialistic policies that they believe will benefit them, in total selfish disregard of whom or how many they may injure.

"WISE OWL CLUBS" SAVE EYES—AND DOLLARS

The impact of a safety idea, born in the mind of an employee of the American Car & Foundry Co., is being felt throughout the industrial world. Up to October 15, that idea is credited with having saved 650 eyes of 620 workers. Incidentally, it accomplished an estimated saving in industrial compensation payments of $1,625,000.

A grinding-machine operator was bending over his whirling wheel when a piece of metal flew from the brakeshoe he was grinding and shattered one lens of

his goggles. That never-to-be-forgotten experience made him realize that his goggles had protected him from blindness, at least in one eye.

Thankfulness for survival from a personal disaster often brings with it an overwhelming desire to help others escape similar fates. So it was with this grinder operator.

With the enthusiastic support of A.C.F., he formed the first "Wise Owl Club," composed of members whose eyesight had been saved by goggles, and dedicated to helping others safeguard their eyes by wearing protective devices. By displaying the club's insignia—an owl, wearing safety glasses—each member identifies himself as a safety-conscious individual and a living example of the value of obedience to safety rules.

Following the establishment of the charter club at A.C.F., the idea has spread rapidly until Wise Owl Clubs, sponsored by the National Society for the Prevention of Blindness, now total 96 chapters in many industries throughout the nation. Significantly, on this list there is only *one* railroad. Why? In these clubs railway safety committees have an excellent means for promoting safe practices in the protection of eyesight. Such clubs are founded on concrete examples of accidents that were prevented by observance of safety rules. They are, in themselves, complete safety campaigns that have enthusiastic employee participation and support. They have produced undeniably beneficial results. Surely, with the aid of such employee-sponsored clubs, any safety program can be made more effective.

TOO BAD ABOUT CREDIT CARDS

This paper expresses no opinion on the overall wisdom of withdrawal by 15 railroads from the 2½-year-old credit card arrangement for the purchase of railroad passenger transportation, effective January 1. All the same, there are negative aspects of the action which might as well be faced. Of these, probably the most important is that the prospective user of the credit cards will henceforth have difficulty remembering the non-participating railroads—and he may conclude that the complexity is too much to bother with at all. Another important consideration is the fact that credit cards play a large part in the success of the air lines in selling their services; and it seems unfortunate and a little difficult to understand why the railroads have been unable to derive a similar sales advantage from the device.

Of course, the service is expensive to provide—but it is a well-known fact that unit costs are high when total volume is limited. This objection might have been removed if a greater effort had been made to "sell" the service. Greater volume of such sales, also, might have habituated ticket clerks to the operation, made them quicker at it, and eliminated one of the other objections, viz., delays at ticket windows. As to the contention that there is little public demand for the arrangement, it might be asked: How many passengers and potential passengers really knew of the service's existence or experienced any genuine effort to have it "sold" to them?

If it be true that some roads "soft-pedaled" these cards, in the fear that too many people would avail themselves of them, it cannot logically, at the same time, be asserted that the public did not want the service. The fact still remains that air line patrons use these credit cards and like them.

The use of railroad credit cards expanded steadily, month by month. It increased more than 10 per cent this year, despite a falling-off in traffic as a whole. As of the end of November, credit cards accounted for about $1¼ million a month in ticket sales (not including the separate cards issued by the Chesapeake & Ohio and the Texas & Pacific—the latter starting February, 1947). Multiplied by twelve this would give a sum equal to 4.5 per cent of the $331.4 million in revenues received by the railroads in 1948 from customers riding in sleeping and parlor cars—the ones most likely to be attracted by the air lines. As of November 28, some 116,000 credit cards of the railroads' joint Rail Travel Credit Agency were outstanding in the hands of 28,000 subscribers—a large group of steady customers—of whose transportation buying habits the railroads had the first accurate running record in their history.

Earl B. Padrick, chairman of the Rail Travel Credit Agency, asserted recently that, over the 32 months' period in which the agency has been in the business of establishing and checking credit for the railroads and assisting in collections from delinquents, "actual losses" (considered uncollectible) have totaled $6,250—a loss ratio of 0.022 per cent—while "potential losses" (i.e., losses most of which are considered collectible) have totaled $30,000—a ratio of 0.130 per cent. These loss ratios are far more favorable than those enjoyed by most businesses extending credit, including the competing air lines.

In view of the favorable loss ratio enjoyed by the railroads, there is reason to believe that some expensive operations in credit checking and monthly billing might cost more than they save and that unit costs of maintaining credit cards could be cut by a judicious relaxation of the present severe conditions of doing business. Billing costs incurred by the individual railroads show a remarkable range per transaction and per customer—some costing almost as much as the total "take" involved; others account for almost no net increase in clerical expense except mailing charges. However necessary withdrawal of so many important passenger carriers from the plan may have been, in the interest of reducing expenses, it should nevertheless be viewed with regret and disappointment.

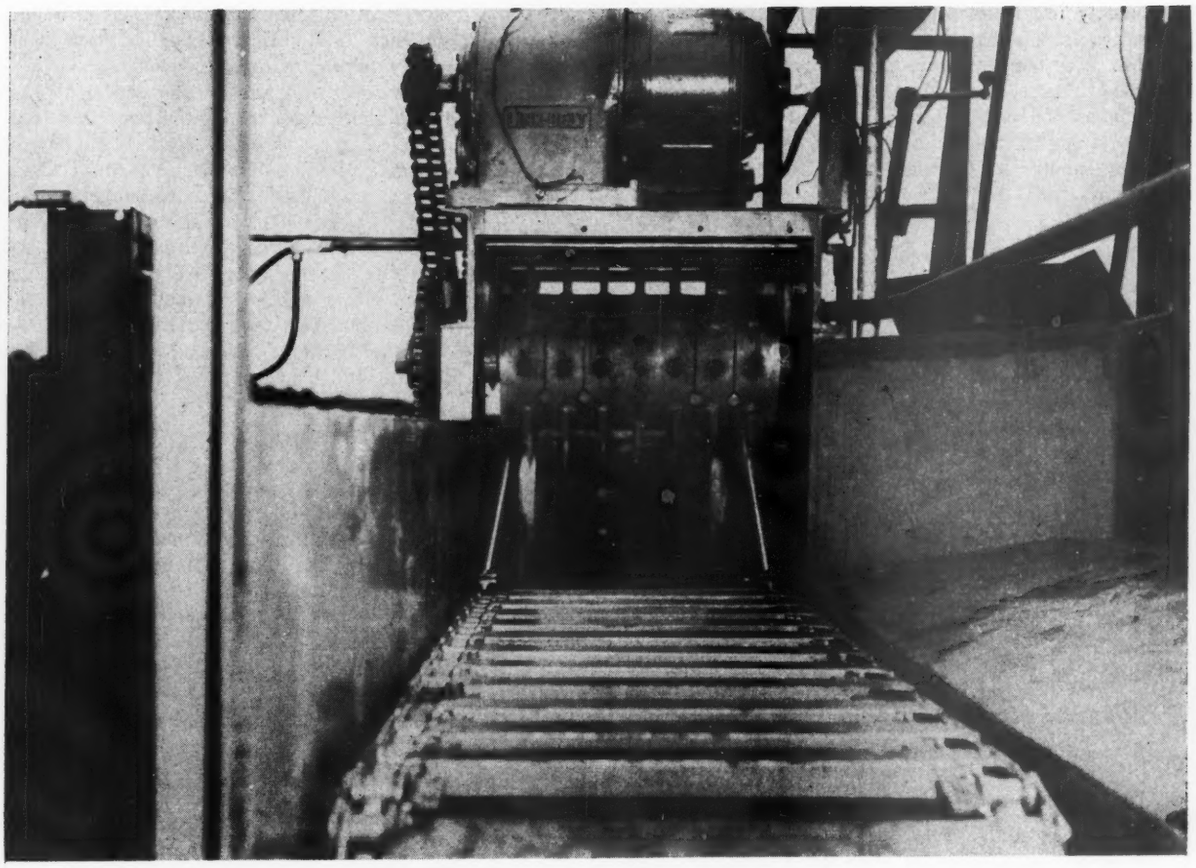
Each machine will fill the end bunkers of a refrigerator car with five tons of ice, graded to the proper size for the commodity, in less than a minute and a half

New Machine

Left—Control buttons governing all icing operations are located on the "bridge" of the machine where the operator has an unobstructed view of the work

The speed and efficiency of the extensive car-icing activities of the Atchison, Topeka & Santa Fe at Bakersfield, Cal., have been greatly enhanced by the recent installation of three Rico platform icers on the road's two high-level icing docks at that point. With these machines, especially designed to serve the requirements at the Bakersfield plant, the work of placing bunker ice in reefers at this point is not only done much faster than before, but important savings are being realized as compared with the former practice of doing the work by hand.

Bakersfield is in the important San Joaquin Valley



The pick-up conveyor pushes the ice cakes up an incline and drops them on this apron conveyor, which feeds them into the crusher rolls

(All photos courtesy Santa Fe Railway)

Ices a Reefer in 90 Seconds

Three units installed by the Santa Fe at Bakersfield, Cal., set fast pace in delivering ice to bunkers of refrigerator cars loaded with perishable produce from San Joaquin valley

agricultural region, and a large volume of produce is iced there for shipment over the Santa Fe in refrigerator cars to eastern markets. Because the ice bunkers of the reefers are always empty at the initial icing point, provision must be made for the delivery of large quantities of ice, graded to the proper size to suit the commodity, and the rapid filling of the bunkers to meet train-departure schedules. To meet the demands of the shippers of the San Joaquin valley for faster, better, and more dependable icing of cars, as well as to satisfy the need for maximum efficiency in the icing operations, the Santa Fe decided to mechanize its docks at Bakersfield with equipment recently developed for this purpose.

The icing facilities at Bakersfield include an ice manufacturing plant, an ice storage house, and two icing docks, one 1,200 ft. and the other 2,200 ft. long. These docks are of the elevated-platform type, with their decks slightly above car-top level, and each has a chain conveyor along its center line. The ice storage house and manufacturing plant are approximately opposite the midpoint of the longer dock and at one end of the shorter dock, so that the conveyors carry the ice

blocks only in one direction on the shorter dock and both ways from about the center of the longer one.

These icing facilities have a capacity for serving 144 cars at one time and, at peak seasons, have serviced as many as 660 cars with five to six tons of ice each in one day. The maximum capacity of the ice manufacturing plant is 720 tons a day, and the storage house capacity is 25,000 tons.

By throwing a lever at the delivery end of the chute, the workman can divert the ice to the near or far hatch opening

Before the improvements were made the work of icing cars at the docks by hand was a time-consuming procedure. The ice cakes were snatched from the chain conveyor, chopped to size, and loaded into the bunkers of each car, about five tons per car. The size of the ice chunks is an important feature in properly icing refrigerator cars, because, for the best results, particular perishable commodities require pieces of a certain size, and manual icing does not always produce the gradation desired and prescribed by shipping regulations. Another consideration having a bearing in the decision to mechanize the docks was the fact that, owing to the continually wet conditions and the abrasion that prevailed. the decks of the icing platforms were expensive to maintain.

Because most of the produce shipped over the Santa Fe from the San Joaquin valley does not require top icing, the facilities at this point are designed only for bunker icing. When top-icing is necessary, the local shippers generally take care of it themselves.

One of the new mechanical icers operates along the full length of the shorter dock, and the two other machines each operate along approximately half the length of the longer one. Although one machine could serve the full length of the long dock, the arrangement to feed the ice cakes to this dock at about its midpoint made it impracticable for one machine to serve its 2,200-ft. length. With two machines this dock's capacity of refrigerator cars can be iced in about the time required by the one machine to serve the cars accommodated by the shorter dock, making switching operations more uniform and efficient.

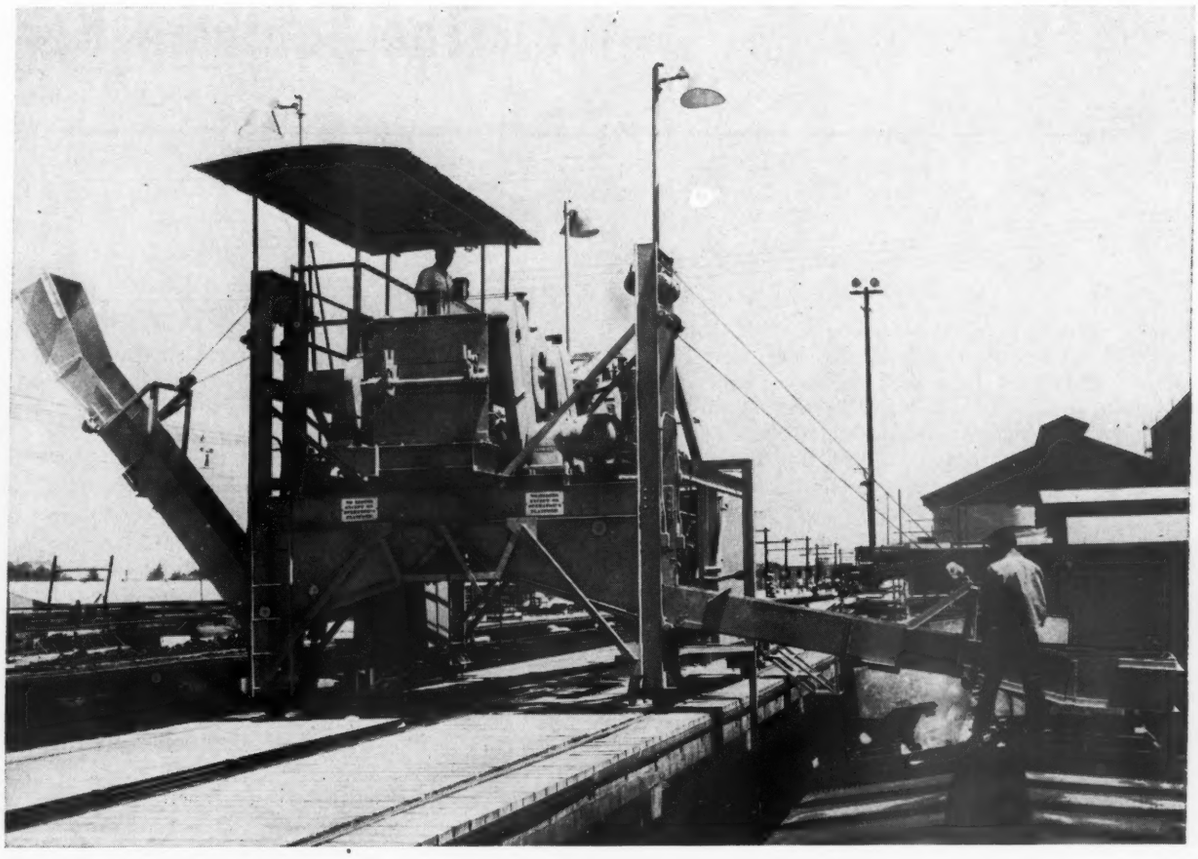
How the Machines Work

The new machines will each crush five tons of ice and deliver it into the bunkers in less than 90 sec. They are self-propelled, are each mounted on four double-flanged wheels, and move along standard rails placed 12 ft. apart on the deck of the platform. The rails for the machine rest directly on I-beam girders and are fastened to them with bolts and clips. The machine straddles the existing chain conveyor on the dock and is capable of scooping up forty 300-lb. blocks of ice a minute, passing them through crusher rolls, and delivering the processed ice to car bunkers through chutes on both sides of the machine to service cars on either side of the dock. The three machines at Bakersfield have been equipped with lights for night operation.

The icing operations are controlled by an operator on a "bridge" of each machine. Stationed where he can see every phase of the machine's operation, the operator simply pushes button switches to control the flow of ice from the storage house; to actuate the chain pick-up conveyor; to operate the crushers, changing them to produce sizes ranging from coarse to fine; and to raise and lower the chutes. By means of still another button switch, the machine can be moved backward or forward at the rate of 300 ft. a minute, while a foot pedal brake facilitates accurate spotting of the machine. A master button switch also is available so that all power can be cut off to de-activate the machine. When a cut of cars is spotted at one of the docks for icing, a consist list is furnished so that the icing-machine operator will know what size ice to deliver to each car bunker.

Smooth Operation Assured

Each machine is powered by six electric motors of various capacities, which receive current from a 440-volt trolley wire at one side beneath the deck. Each operational phase of the machine is designed to have a slightly higher capacity than the preceding one, and thus avoid having any one operation "back up," such as might be the case if a lug on one conveyor did not synchronize with that of a preceding one, or if an ice cake slipped on the apron conveyor. In other words, the ice cakes enter the machine individually on a pick-up conveyor which moves a little faster than the dock conveyor; the cake drops by gravity to the crushers at a still faster rate; if the ice is to be fine-crushed, it moves through a second crusher of greater ice capacity; and it then drops to the car-loading chute, which is capable of handling ice faster than the crushers.



Ice may be delivered through a chute on each side of the mechanical icer. Strategically placed floodlights on the machine facilitate night operation

A device has been developed for use with the mechanical icers to add salt to the ice as it flows down the chutes. However, since potatoes, which constitute a large proportion of the produce shipped from Bakersfield, do not require salted ice, this device was not made a part of the installation.

The icing machines weigh approximately 22,000 lb. each, and their wheelbases are such that the weight of each machine is always distributed over two or three of the dock panels which are 14 ft. in length. The machines were developed jointly by the Railways Ice Company, Chicago, and the Santa Fe. W. W. Kelly, general purchasing agent of the Santa Fe, who is in charge of its ice-servicing facilities, exercised general supervision, with John F. Daly, manager of ice plants, in direct charge of the work for the railroad. The machines were manufactured by the Link Belt Company, Chicago.

New Book . . .

ELECTRICAL ENGINEERS' HANDBOOK (Electric Power), prepared by a staff of specialists — Harold Pender, Ph.D., Sc.D., and William A. Del Mar, A.C.G.I., editors. Semiflexible binding. 1,700 pages; 5½ in. by 8½ in. Published by John Wiley & Sons, 440 Fourth Avenue, New York 16. $8.50.

The handbook is now issued in two volumes, one devoted to electric power and the other to electrical communication and electronics. Seventy-one specialists have contributed to this entirely rewritten electric power volume, as compared with twenty-seven, forty-five and fifty to successive previous editions. This reflects the increased importance which several subjects have assumed. Concerning fundamentals, the book deals with mathematics, properties of materials, electric circuits, principles of electrochemistry, etc. Some of the subjects covered which concern practice are batteries, d.c. and a.c. rotating machinery, rectifiers and inverters, switchgear, power stations and substations, power transmission and distribution, lighting and heating, servomechanisms, transportation, electrochemical and electrothermal processes, and rural electrification distribution systems.

The Southern Keeps

Sunday drivers are familiar with the fact that over-the-highway transportation companies keep their freight rolling on a seven-day-a-week schedule. Drivers who have occasion to be on the highways at any hour throughout the night know that the truckers also keep up a 24-hour-a-day movement. Probably these drivers, if asked, would express their belief that the railroads do the same thing.

The simple truth, of course, is that the railroads have not always been doing the "same thing" with respect to the kinds of traffic where competition from trucks is most keen. For carload traffic, yes, the railroads operate trains around-the-clock and every day of the week. And railroad classification yards where these trains are made up follow the same schedule.

It has not been so, however, at all railroad transfers, the "classification yards" for l.c.l. freight, which is the type of traffic on which truckers have made the greatest inroads. Often, too, it is the type of traffic that carries the highest or most profitable rates.

Speedy Movement Attracts Traffic

Historically, railroads have tended to classify transfer operations with freight station operations. Fundamentally, this approach is wrong and has always been wrong. Freight *stations* are concerned primarily with the *receipt and delivery* of freight and the hours during which they are open can be regulated by the actual needs or demands of shippers and receivers of the freight railroads transport. Freight *transfers* are concerned with the *movement* of freight already in transit from a shipper to a receiver, from a freight station to a freight station.

There is no question here of what the actual needs of both the shippers and receivers are; each is concerned with the fastest possible movement the railroads can give to the products the one group turns over for delivery to members of the other group. Certainly, in the light of present-day losses of traffic to highway trucks, there can be no question about what both shippers and receivers are demanding. They want the shortest possible time in transit (rates, too, are, of course, a factor) and where truckers offer speedy movement for traffic they are getting the business.

Trucks, either common carrier or privately owned, are getting much of the choice and more profitable types of merchandise traffic that once played such a big part in railroad operations and provided many railroad jobs all along the line, but largely in agency and transfer work. As railroad merchandise tonnage has shrunk because of diversion from the rails, railroad service has deteriorated because there is no longer enough traffic to support a sufficient number of long distance car lines to give prompt handling to large volumes of merchandise business. The resulting inferior service has, in turn, led to further losses in tonnages, as any railroad's freight traffic solicitors can testify.

Transfer Work Concentrated

The Southern, which has operated its major transfer points on a seven-day basis whenever the volume of business at those points required it, has reorganized the transfer operation by eliminating auxiliary transfer points and concentrated all such operations at six major transfers. These major transfers will be operated, as they often heretofore have been, on every day in the calendar week, which will give better service than was possible when merchandise traffic was handled at auxiliary transfers. This means that shippers of railroad merchandise traffic will be given better service, certainly insofar as time in transit is concerned. This cohesive and continuous method of operation will assure that business will not hereafter be delayed at transfers and will eliminate a multiplicity of transfer handling at different points.

The six major transfers, modern and mechanically-equipped, are located at these key points: Spencer Transfer, N. C., John Sevier Transfer, Tenn., Atlanta, Ga., Birmingham, Ala., Chattanooga, Tenn., and Cincinnati, Ohio.

The centralization program has also permitted still further improvements in handling to be brought about which also interest and appeal to shippers. Instead of loading cars to break bulk at auxiliary or secondary transfer points, the railroad has established many additional car lines to more distant transfers and is loading many more solid cars direct to consignees or destinations. Under the new operation, week-end accumulations and cars held for further loading are no longer found at the transfer points.

There have been incidental benefits of considerable value also, both to shippers and to the railroad. An appreciable saving in car-days—and car-miles—is being realized.

To use an analogy from basketball—the Southern is "shooting for the basket" from the middle of the floor instead of "working the ball up under the basket" in a series of short passes from point to point. The Southern's customers have reacted favorably already to this new style of "play" by the railroad.

In the deadly serious business of competition for l.c.l. traffic, the Southern feels that it has started something that will enable it to retain its present merchandise traffic and gives considerable support to the hope that it can regain at least a part of the substantial volume of this traffic that has been drawn away by competitors, particularly traffic now being handled by highway carriers.

Merchandise Traffic MOVING

By J. R. FORMBY
Manager, Stations & Transfers
Southern

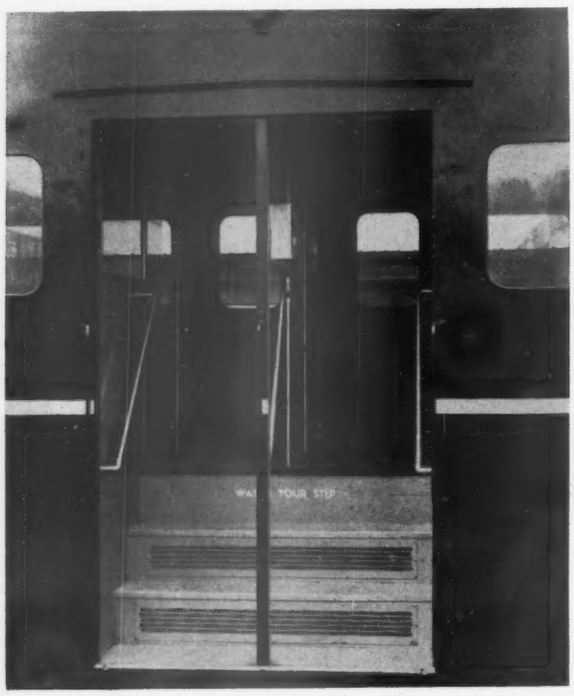
Above—A freight "train" at the Southern's freight transfer, Birmingham, Alabama. Below—Platform at the Southern's freight transfer in the same city

ROCK ISLAND INTRODUCES STREAMLINED SUBURBAN SERVICE

Benefactors of $5 million improvement program "get the low-down" on commuter service costs and problems

At 7:37 a.m. on November 21, the "Bankers Special," Chicago, Rock Island & Pacific Joliet-Chicago commuter express, made its debut as a streamlined train, powered by one of the road's 12 new 1,500-hp. Diesel-electric suburban locomotives. The train was made up of seven newly built coaches, especially designed for the Joliet-Blue Island-Chicago suburban service, which handles about 35,000 passengers every weekday. By the end of November, the total order of 20 cars were delivered, and assigned so as to cover 32 of the road's 110 Monday-through-Friday suburban runs.

A pre-inaugural run to introduce the new equipment to the press, radio, civic and political leaders was staged on November 17. To dispel the notion that the railroads are only "kidding"—that commuter service can't help but pay "because the '5:15' is loaded to the gills"—William E. Hayes, executive assistant in charge of public relations, pointed out a few facts which are not so obvious to the daily commuter. As the train passed the Rock Island's 12th Street suburban coach yard, a narrator—using an especially rigged-up speaker—pointed out that there were approximately 115 cars laid up there for the day. "These cars," he explained, "produced revenue this morning for a minimum of 45 min. to a maximum of 1 hr. 15 min. They will be idle until the rush hour this afternoon, when they will again be in service for similar periods. In other words," he continued, "these cars earn revenue for only about two hours out of 24, and are idle about 22 hr." It was further related that similar facilities have to be maintained at both Blue Island and Joliet to take care of this equipment overnight. "Forty employees," it was stated, "are engaged solely in cleaning and servicing these 115 cars."



Each of the Rock Island's new suburban coaches has four sets of double doors—two on each side—in place of the conventional vestibule at each end. The doors are pneumatically operated by controls, visible near the center of the illustration. Six doors, in three adjacent cars, can be operated by a trainman in any of the three coaches.

Mr. Hayes enumerated the cost of the improvement program, of which the new cars are the culmination, as follows:

Diesel locomotives (12)	$2,065,419
Suburban coaches (20)	2,000,000
Remodeled coaches (115)	575,000
New (6) and rebuilt (8) suburban stations	207,126
New crossing protection*	89,061
New rails*	101,966
	$5,038,572

The product of this multimillion dollar improvement program had been pointed out to the passengers earlier, on the trip to Joliet, and a stop had been made for inspection of the new 95th Street (Beverly Hills) station.

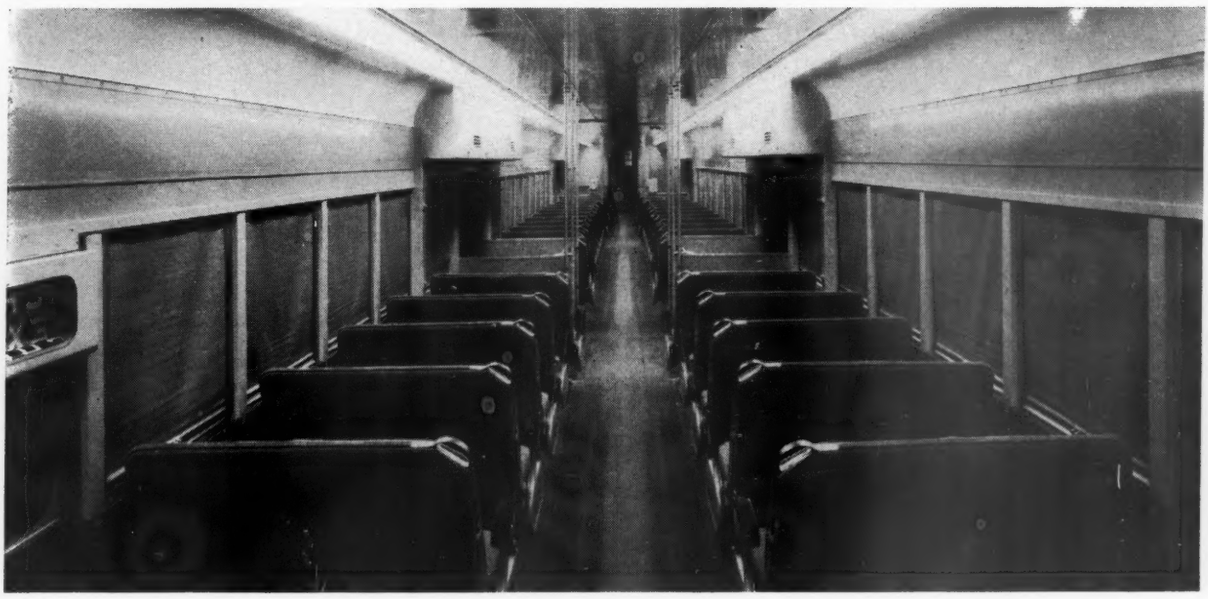
Bargain for Rail Commuters

Mr. Hayes outlined the estimated revenues and expenses for the 1949 suburban operation, indicating a $1,381,219 deficit, and showed the guests (among whom were the chairman and three members of the Illinois Commerce Commission) that elimination of the losses would require a rate increase of 68.7 per cent.

The 15.7 mi. run from Blue Island to Chicago—on a multiple-ride ticket—costs Rock Island commuters 19 cents a trip, Mr. Hayes stated. The same trip by municipally owned bus and elevated costs 25 to 32 cents a ride. The Rock Island takes 28 to 45 min., the more expensive transit journey takes from 75 to 90 min., and requires at least one change of cars.

The 20 new cars—constructed of lightweight, Cor-Ten

*These installations were made on the suburban loop, used almost exclusively by the road's commuter trains.



The interiors of the Rock Island's new streamlined coaches for commuters are painted gray, tan and blue. Fittings are chromium plated. The seats are of light brown fabric, with plastic arm rests. Fluorescent lighting, air-conditioning and electric heating are powered by 110-volt alternating current, furnished by under-car Diesel generators

steel—were built by the Pullman-Standard Car Manufacturing Company at Worcester, Mass. Each car is 85 ft. in length, and seats 102 passengers. The major departure from conventional design is the door arrangement. There are two double doors on each side of each car, located just clear of the trucks, toward the center of the car. The doors, pneumatically operated, slide into the car wall. Door controls can be coupled through any three adjacent coaches, and the six doors on the platform side can be controlled by a single trainman located in any one of the three cars.

The coaches are equipped with all-coil spring trucks, roller-bearing journals, snubbers and shock absorbing devices, tight-lock couplers and electric brakes. Twelve of the cars are air-conditioned, and eight have forced air ventilation. Four of the air-conditioned cars have toilet and washroom facilities, and will be assigned so that one of these will be included in each train on the 40-mi. Chicago-Joliet runs.

The power supply for lighting, heating and air-conditioning or air-cooling is furnished by a 25-kw. Waukesha Diesel generator under each car, producing 110-volt alternating current. Electric grids located in the Multi-Vent ceiling provide heating along with the year-'round ventilation system, until the outside temperature falls below about 25 deg. F. At lower temperatures, standard steam heating is also used. In case of a power failure in any one car, the power can be train-lined so that the otherwise nonoperative car can continue in service.

The 20 new 102-passenger suburban cars will permit retirement of approximately 30 conventional type cars.

J. D. FARRINGTON, ROCK ISLAND PRESIDENT, DISCUSSES THE SUBURBAN TRAIN PROBLEM

Mr. Farrington, himself a *fare-paying* commuter of long record [on the Chicago & North Western], feels that those trunk lines which are obliged to furnish this unprofitable service should try to do so "in a manner fair to the public and to the owners of the railroads as well." Rates should be as high as can be charged within reasonable limitations, he asserts, and the service should be geared to the commuters' requirements—adequate, but limited to that which is fully patronized. Equipment should be of special design, of high carrying capacity, clean, plain and attractive. The problem, Mr. Farrington says, is largely one of policy and public relations.

The Rock Island's twenty new suburban coaches are assigned so as to permit maximum utilization of the streamlined equipment. The runs here listed are equipped completely with the new cars.

No. of Cars	2	3	7	8	3	4	4	2	2	2	3	3	2	3	3	3
	am	am	am	am	am	am	pm	pm	pm	pm	pm	pm	pm	pm	pm	pm
Lv. Joliet	5:05	5:25	7:37	...	9:45	...	...	...	1:50	...	...	...	6:28	...	...	...
Lv. Blue Island	5:44	6:12	...	7:59	10:35	11:35	1:06	1:35	2:42	2:35	3:02	6:37	7:18	7:00	9:25	10:25
Ar. Chicago	6:15	6:32	8:30	8:41	11:00	12:20	1:51	2:10	3:02	3:20	3:48	7:25	7:40	7:50	10:10	11:10

No. of Cars	3	4	2	4	2	2	3	5	7	8	3	3	3	3	3	2
	am	am	am	am	am	am	pm	pm	pm	pm	pm	pm	pm	pm	pm	am
Lv. Chicago	7:30	9:10	9:25	10:45	11:15	11:40	1:27	4:25	5:10	5:20	8:20	9:10	10:38	11:35	11:55	12:55
Ar. Blue Island	8:06	9:55	9:59	11:30	11:49	12:25	2:12	4:56	...	6:03	9:05	9:55	11:23	12:06	12:40	1:39
Ar. Joliet	8:45	...	...	...	12:30	...	...	5:35	6:00	...	...	...	...	12:47	...	2:20

N. & W. RE-EQUIPS "POWHATAN ARROW"

Two new steam-powered trains include 20 ultra-modern, lightweight passenger cars built by Pullman-Standard

The Norfolk & Western will place in service on December 12 complete new car equipment for the two "Powhatan Arrow" all-coach trains which have been operating daily each way on the 676-mile run between Norfolk, Va., and Cincinnati, Ohio, since April 28, 1946. The original "Arrow" cars are still in excellent condition and will be used in other trains. The new equipment, comprising two 10-car trains, built by the Pullman-Standard Car Manufacturing Company, has been installed to make the "Powhatan Arrow" thoroughly up-to-date. The new cars have been exhibited in each of the cities where the trains normally stop along the line between Norfolk and Cincinnati.

Each of the new trains includes one combination coach-locker car, one two-compartment coach, five full coaches, two diners and one lounge-tavern-observation car. The structural material used is principally low-alloy high-tensile steel fabricated by welding. Each car has a coupled length of 85 ft. As shown in one of the tables, the car weight varies from 133,600 lb. for the combination coach to 143,150 lb. for the diner. The total seating capacity of each train, including diner and lounge space, is 520.

Consist of Each of the Two "Powhatan Arrow" 10-Car Trains

Car type	Number of cars	Seating capacity	Weight, lb.*
Comb. coach-locker	1	40	133,600
2-Compartment coaches	1	66	136,075
Full coaches	5	290	135,240
Diners	2	72	143,150
Lounge-tavern-obs.	1	52	135,600
	10	520	

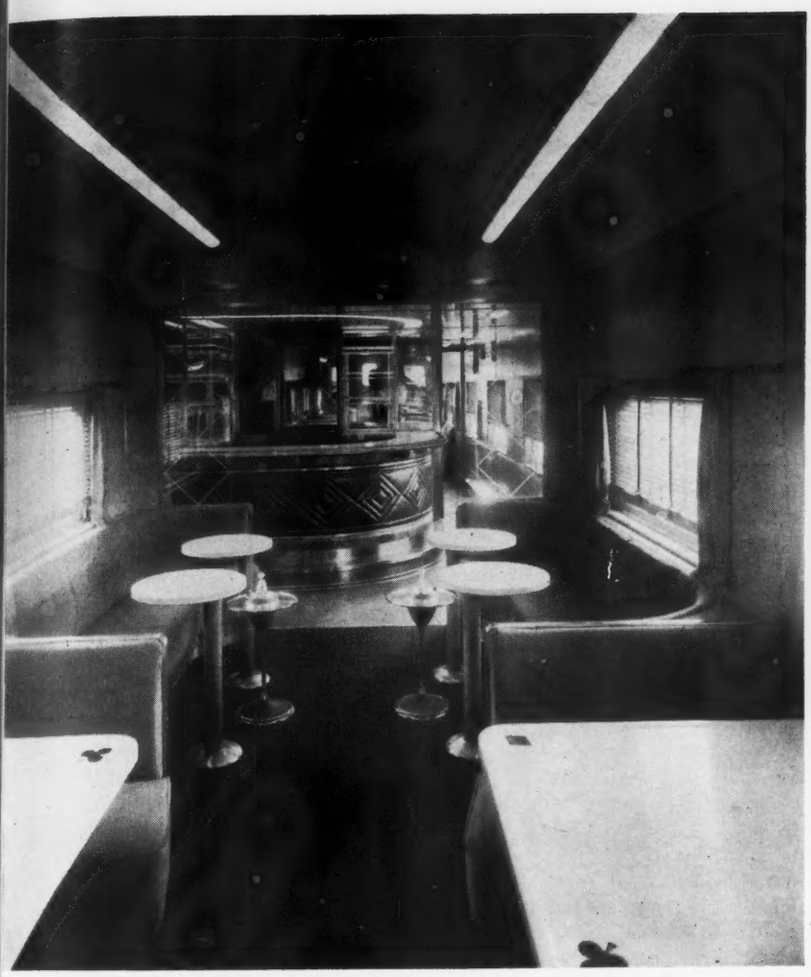
* Includes truck weight of 41,000 lb. per car set

Steam Motive Power

The fleet of fast, powerful, streamline coal-burning steam locomotives which pull the "Arrow" were designed by the N. & W. motive power department and built in the company shops at Roanoke, Va.

Designated Class J and numbered in the 600's, these locomotives were built primarily to haul heavy passenger trains in mountainous territory, but are capable of high speeds on straight, level track. The streamline effect of these locomotives is enhanced by their high-gloss black color, with a rich Tuscan red stripe running the entire length of locomotive and tender. Lettering and borders on the stripes are of bright gold. Each locomotive has a tractive force of 80,000 lb., is 109 ft., 2¼ in., long, overall, and weighs in working order with the tender, 872,000 lb.

The wheel arrangement is 4-8-4. Lightweight rods and reciprocating parts are used; also automatic lubrication to 220 points. The Class J locomotives have attained



CAPTIONS READ CLOCKWISE—Tavern and bar section of the observation car. One of the 58-seat full coaches. The distinctive quality of the dining-car interior is effected by the use of color. The observation lounge

exceptional records for dependable long-distance runs, minimum service requirements and quick turn-arounds at terminals. Each locomotive has an assignment of approximately 15,000 miles a month.

Class J locomotives were chosen for this service because of their proved operating results. In addition to high availability and an actual utilization averaging 60 per cent, the maintenance has been extremely low. The total accumulated maintenance cost of this power over an eight-year period is about 20 cents per mile. Developing 5,300 drawbar horsepower, the locomotives easily handle trains up to 15 cars unassisted over all parts of the mountainous N. & W. except between Williamson and Bluefield, W. Va., where the ruling grade is two per cent.

Passenger Coaches

Seven passenger coaches are used on each of the new "Powhatan Arrow" streamliners. Five of the coaches have a seating capacity of 58 persons each, while the other two have been divided, one to provide space for a smoking room, steward's quarters and a locker for members of the dining crew, and the other to provide two passenger compartments.

The two-compartment coach seats 42 persons in one section and 24 persons in a second section. The other car, which features a smoking room with individual chairs for eight persons, seats 40 passengers in the coach section. Also included in this car are quarters for the train's steward and members of the dining-car crew.

There are spacious men's and women's lounges in all coaches, and all lighting is fluorescent with individual lights conveniently located in overhead baggage racks.

Heavy baggage is stored in baggage compartments near the vestibule entrance of each car, while the overhead racks are available for hand luggage and hats and coats. Electrically cooled drinking water is available at the end of each car.

Large fog-proof picture windows and improved air-conditioning further add to passenger comfort in the coaches. Color treatments have created restful interiors that are an invitation to relaxation.

The main coach compartment in the combination coach and locker car has a ceiling of light tan and wall tones in a medium green. The window shades are a gold tone textured material and seat coverings are in deep brown with a chevron pattern. The floor under the seats is mahogany brown rubber tile. The main aisle strip is green marbleized tile.

In the two-compartment coach the general colors are tan and brown. Bulkheads in this coach are covered in a beige corded synthetic leather and photomurals worked out in gold tones are used on either side of the main entrance doors. These murals are interesting pictures of scenes along the Norfolk & Western.

The five regular coaches in each train have three different color schemes. One car is finished in tan and brown, the same as the two-compartment car. Two cars are done in a gray and cedar combination and two others in a blue-and-brown combination.

The lounge rooms in the latter are done in tan and blue. Ceilings are light tan, walls medium tan, and window shades are in light blue. Chairs are upholstered in brown and the floor covering is a blue marbleized rubber tile.

All seats in the coaches are rotating and reclining and spaced on 3-ft. 5-in. centers. Individual free-turning foot rests, covered with rubber, are provided on the back of each seat to give maximum foot comfort in any one of four adjustments.

All end doors are electro-pneumatically controlled, a slight pressure of the door plate on the outside or a slight pull of the door handle on the inside opening the doors automatically. Door action is timed to conserve conditioned air within all cars of the train.

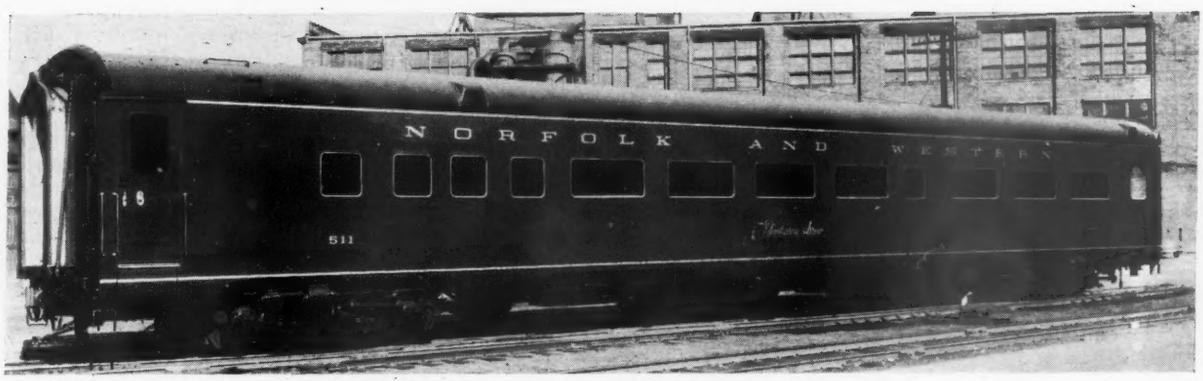
All cars utilize Vapor train heating equipment and Frigidaire air cooling, supplied by an eight-ton compressor and condenser unit under each car. Temperatures are controlled by thermostat and change from heating to cooling is effected automatically.

Dining Cars

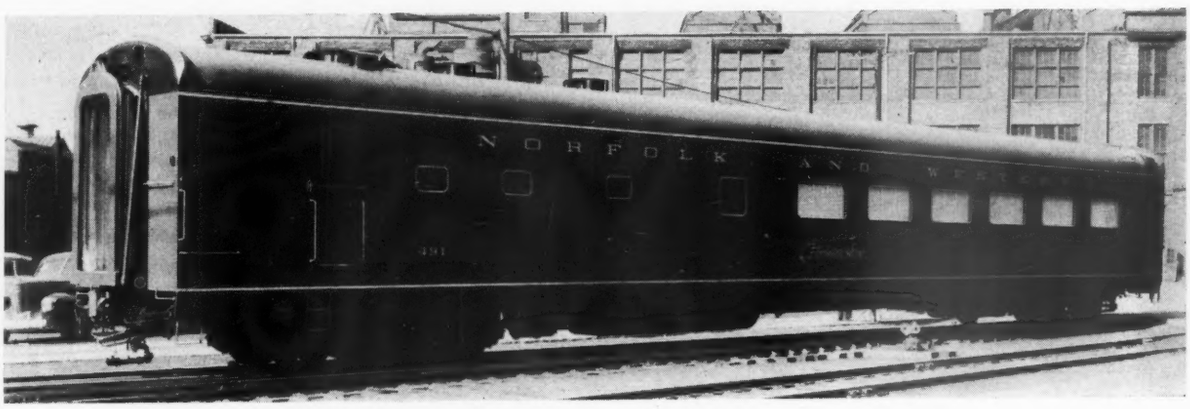
The dining cars, seating 36 each, are finished in a combination of yellow, gray and red. The ceilings are a light yellow and the walls and wainscoting gray. The upper portions of the bulkhead walls are covered in quilted maple Flexwood finished in gray tones.

Seat coverings are a special red needlepoint material, and the carpet is a deep red two-tone Hooksett type. A striking effect is introduced in the dining room by the use of flesh-tinted mirrors on the backs of which are etched designs in gold. Colorful Venetian blinds add to the overall decorative scheme.

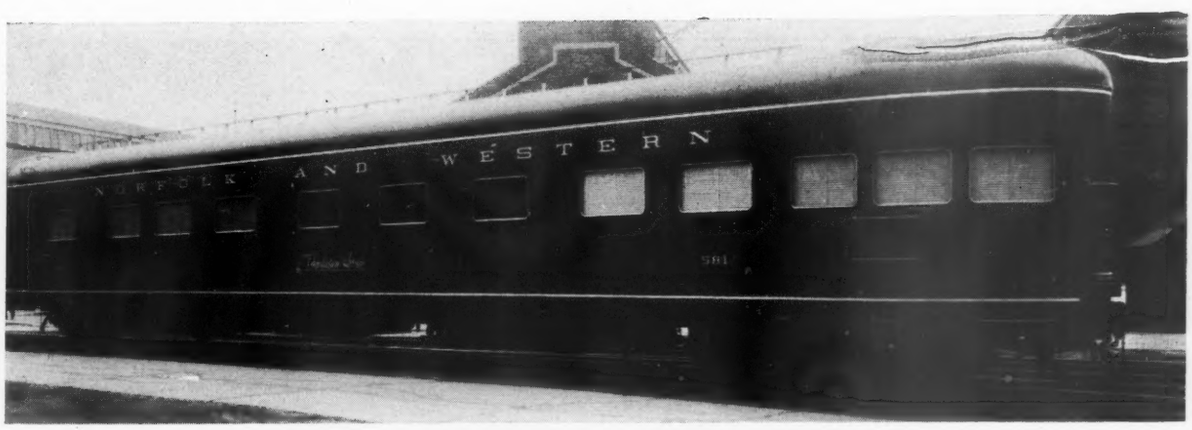
The passageway at the steward's end has a ceiling of light yellow with walls of medium tan in contrast to the gray tones of the dining room itself. A buffet in blond wood veneer is used at the main bulkhead with a round



One of the two-compartment coaches



The diner

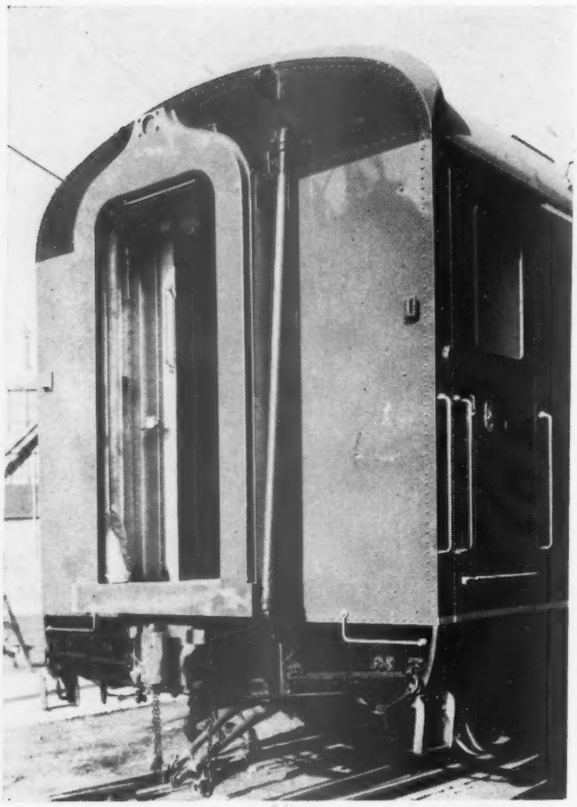


The observation car

mirror above it in gold tint. The floor at this section of the car is a red marbleized rubber tile.

The kitchen of the dining car constitutes an impressive display of stainless steel, used throughout for cleanliness and general appearance. Kitchen equipment includes ranges, steam tables, broilers, electric dish washer and garbage disposal unit, frozen food lockers, and cup and plate warmers.

The observation-lounge-tavern car is divided into a number of sections, including an 11-ft. 10-in. lounge with depressed ceiling, seating 12; a 20½-ft. tavern-lounge section, seating 24; 6-ft. 2-in. bar; 8½-ft. pantry; 5⅓-



A typical coach end

ft. hostess room; and 24-ft. observation lounge, seating 16. The total seating capacity is 52. Color schemes for the different sections, while related, differ in detail. Venetian blinds are used throughout the car.

The lounge section is divided from the tavern-lounge in the middle of the car by wing partitions in which Lucite is used to separate the sections. The ceiling is done in light apricot and the walls in gray rift oak. Wall covering on the bulkhead is a synthetic leather in a corded design. The seat covering is in blue with a darker blue carpet. Table tops are in a blond wood Formica with special inlays done in red and black. Pier panels are covered with flesh tint mirrors which add spaciousness to the appearance of the room.

An open bar features the tavern section, with bar front worked out in a diamond design of red leather with a yellow leather piping. The bar top is in yellow Formica and ornamental flesh-tint mirrors are installed at the back bar. A photomural depicting an N. & W. scene is also effectively used on the back central portion of the bar.

The observation-lounge, which seats 16 persons in individual chairs, has ceilings of light apricot and walls of medium blue. The bulkhead at the forward end of the lounge has squares of rift oak Flexwood applied with the grain lines alternating horizontally and vertically. Also on this bulkhead are placed two water-color paintings with the sea as the subject.

Draperies are two-tone gold horizontal striped material and the seat coverings alternate in tones of gold and red. The gold tone matches the tone of the draperies and the red tone is used for color accent. The same dark blue carpet used in the forward end of the car is repeated here. Flesh tint mirrors are used at the pier panels and create interesting reflections in the room.

Lighting is of the direct and indirect type for reading and general illumination. This section also features a writing desk and magazine racks.

Each "Arrow" car is equipped for wire-recorded music which assures passengers a wide selection of favorite melodies. Scientifically placed speakers bring entertainment without blare or distortion.

Multi-channel reproducers offer a selection of different types of music. One channel pipes popular music to

Partial List of Materials and Equipment on the New "Powhatan Arrow" Trains

Car builder	Pullman-Standard Car Mfg. Co., Chicago
Aluminum	Aluminum Company of America, Pittsburgh, Pa.
Low-alloy steel	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Stainless steel	Allegheny-Ludlum Steel Corp., Pittsburgh, Pa.
Truck frames	General Steel Castings Corp., Granite City, Ill.
Truck springs	American Locomotive Co., Railway Steel Spring Div., New York
Wheels	Edgewater Steel Co., Pittsburgh, Pa.
Journal bearing and boxes	Hyatt Bearings Div., General Motors Corp., Harrison, N. J.
Air brakes	Westinghouse Air Brake Co., Wilmerding, Pa.
Clasp brakes	American Steel Foundries, Chicago
Hand brakes	National Brake Co., New York
Slip control equipment	Westinghouse Air Brake Co., Wilmerding, Pa.
Hydraulic shock absorbers	Monroe Auto Equipment Co., Monroe, Mich.
Draft gear	Waugh Equipment Co., New York
Batteries	Edison Storage Battery Division, Thos. A. Edison, Inc., West Orange, N. J.
Air-distribution panels and electric train line connectors	Pyle-National Co., Chicago
Genemotors, two, 15-kw.	Safety Car Heating & Lighting Co., N. Y.
Generator drive	Spicer Manufacturing Div., Dana Corp., Toledo, Ohio
Air-conditioning equipment	Frigidaire Division, General Motors, Dayton, Ohio
Air filters	American Air Filter Co., Louisville, Ky.
Steam-heat equipment and controls	Vapor Heating Corp., Chicago
Floor composition	Tuco Products Corp., New York
Insulation	Johns-Manville, New York
Garbage disposal unit	General Electric Co., Chicago
Dishwasher	Stearnes Co., Chicago
Motor alternator	General Electric Co., Schenectady, N. Y.
Floor coverings:	
Rubber	Goodyear Tire & Rubber Co., Akron, Ohio
Carpet	Archibald Holmes, Chicago
Coach seats	Ajax-Consolidated Co., Chicago
	S. Karpen & Bros., Chicago
Seat coverings	Collins & Aikman Corp., New York
	Goodall Fabrics, Inc., New York
Drapery	Orinoka Mills, New York
Window capping and table tops	Formica Insulation Co., Cincinnati, Ohio
Vibration dampening pads	Fabreeka Products Company, Boston, Mass.
Window shades	Goodall Fabrics, Inc., New York
Lighting fixtures	Luminator, Inc., Chicago
Window sash	Adams & Westlake Co., Elkhart, Ind.
Lucite	E. I. du Pont de Nemours & Co., Arlington, N. J.
Water coolers	Westinghouse Electric Corp., Pittsburgh, Pa.
Paper-cup dispensers	United States Envelope Co., Worcester, Mass.
Public address, wire recorder and amplifier equipment	Capehart-Farnsworth Corp., Ft. Wayne, Ind.
Copper tubing and sweated fittings	Chase Brass & Copper Co., Waterbury, Conn.
Fire extinguishers	Pyrene Manufacturing Co., Newark, N. J.
Car couplers and yokes	National Malleable & Steel Castings Co., Cleveland, Ohio
Hoppers	Duner Co., Chicago
Washstands	Crane Co., Chicago
End door operators	National Pneumatic Co., Rahway, N. J.

the various cars, while the other provides semi-classical or dinner music. To facilitate train announcements, the system is linked with a public-address system controlled from the steward's locker in the dining car or from the passenger representative's office in the two-compartment coach.

Eight speakers are located in the ceilings of the combination coach and locker cars, nine in the compartment coach cars, 10 in the regular coaches, six in the dining car, and eight in the observation-lounge-tavern car. All cars have been wired for the future installation of AM and FM radio reception.

ELECTRICAL DEFICIT MADE UP BY UNDER-CAR PLANT

One of the Chicago, Rock Island & Pacific's streamliners, the "Peoria Rocket," recently provided an excellent example of resourceful railroading. This train makes two high-speed round trips daily between Chicago and Peoria, Ill., a total of 644 miles, in less than eleven hours scheduled time. This includes three to five stops on each one-way trip. Some cars of this train are equipped with electro-mechanical air-conditioning, electric power for which is supplied by storage batteries and 20-kw. generating units driven from the car axles.

During the 14 hours out of each 24 when the train is standing, or being turned at each end of the run, the axle generators, of course, are furnishing no electrical energy, and yard or terminal charging facilities are not available. Thus, it became advisable to provide an additional source of power, not dependent on car movement, to avoid excessive drain on storage batteries, with resultant drop in voltage and consequent impairment of air-conditioning and lighting functions.

To make up the power deficit a Waukesha under-car power plant was installed on the observation car. This unit provides more electrical energy than is required on the observation car, and the surplus is diverted through a train-line to the other cars, to supplement the power supplied by their axle generators.

The power plant, called a Waukesha Enginator, is a power-package, consisting of a Diesel engine, coupled to a 25-kw. generator, with fully automatic controls which respond to the varying demands made on the electrical system. It starts and stops automatically on current demand.

To facilitate periodic maintenance service, the power unit is so mounted on the car as to permit easy and quick replacement. In a trial made on the station platform at Peoria, Ill., a power unit was removed, and a duplicate replacement unit installed in 35 minutes.

The Enginator was rolled out from under the car on its own tubular track-mounting extensions. Electrical connections, fuel oil lines and steam heat exchanger lines, planned for quick disconnection and reconnection, were readily detached. A Hyster industrial lift truck was driven alongside, its fork lift thrust under the Enginator unit, and the latter lifted from its mountings. Then it was only necessary to back the Hyster away, set down the load, pick up the replacement unit, roll it into place, and connect it.

Adequate handling facilities make the removal and replacement of under-car plants a simple operation

Railroads Complete Case

Railroads and interveners supporting them completed on December 5 their presentations to the Interstate Commerce Commission in five of the so-called government reparations cases. The presentations were made at Washington, D. C., hearings before the commission's Division 4, with Commission Chairman Mahaffie presiding and Commissioner Mitchell and Examiners Howard Hosmer and M. L. Boat also sitting.

As noted in *Railway Age* of December 3, page 39, where the opening sessions of the hearings were reported, the five cases, like 12 other pending proceedings, arose out of complaints whereby the Department of Justice is seeking to recover alleged overcharges it claims the railroads made on government shipments of various commodities during World War II. The assailed charges are those paid by the government on export freight stopped at storage-in-transit depots; those paid as a result of the application of railroad "policing" rules to government shipments moving to Pacific Coast ports for export; and rates paid by the government on its wartime shipments of soldiers' pack-carrier cases, aluminum airplane landing mats, and steel airplane landing mats.

Further Hearing March 20

Examiner Hosmer, who was presiding as the hearings closed, fixed February 20 as the date by which the Justice Department must submit its rebuttal evidence to the railroads and the commission; and March 20 as the date for further hearing to receive that evidence. Attorneys for the department had asked that they be given until March 15 to submit this evidence while railroad attorneys suggested a deadline of February 1. Examiner Hosmer told counsel that, if they didn't like the dates he had fixed, they could take the matter up with Division 4. The government's principal evidence was submitted at a previous series of hearings held June 21 to 23 (see *Railway Age* of June 25, page 102, and July 2, page 50).

Railroad evidence offered subsequent to that reported in last week's issue included statements and exhibits of some 45 additional executives. Most of them did not appear in the witness chair because their statements were entered into the record by agreement, and the Department of Justice attorneys requested the appearance of relatively few of them for cross-examination.

Statements dealing with the complaints on a national or regional basis included those of J. Elmer Monroe, assistant vice-president of the Association of American Railroads and assistant director of its Bureau of Railway Economics; Arthur H. Gass, chairman of the A.A.R.'s Car Service Division and wartime manager of the latter's Military Transportation Section; John J. Fitzpatrick, chairman of the Traffic Executive Association—Eastern Railroads; Joseph G. Kerr, chairman of the Southern Freight Association; and H. C. Hallmark, freight traffic manager of the Southern Pacific and chairman of the special "defense" committee of the Western Traffic Executive Committee.

World War I Rent Was 4.82 Per Cent Return

Mr. Monroe said that if it had not been for the service performed by privately owned and privately operated railroads during World War II, the cost of transportation to the government would have been many times higher than it was. He pointed out that, during the World War I period of government operation, the carriers were paid a rental on their properties which amounted to a 4.82 per cent return on their investment, while they earned only 4.62 per cent during World War II.

"Operation of the railroads during World War I," Mr. Monroe continued, "cost the government more than $46,000,000 each month, in addition to the transportation charges for troops and materials handled on the rails. On the other hand, during World War II, the government, after paying its transportation charges, received from the railroads more than $54,000,000 each month in the form of federal income taxes. Comparing the experience of the two wars, the government was better off by more than $100,000,000 each month."

The savings to the government were even greater than the foregoing indicates, Mr. Monroe went on to explain. He noted that the railroads now have much deferred maintenance to make up, whereas the government paid the railroads $186 million for maintenance deferred during the federal-control period. Like previous witnesses, Mr. Monroe found that the relatively favorable financial results of World War II operations were due largely to the fact that passenger business was then profitable.

Chairman Gass of the Car Service Division testified that the railroads did their wartime job without consideration of the cost to the industry as a whole or to any individual railroad. He explained that special and expedited services in the handling of wartime freight and troop movements were performed at a much greater cost than if the same volume of traffic were handled under peacetime conditions. C.S.D.'s Military Transportation Section, which he headed during the war, was a good example of the manner in which the railroads performed a "vital" service for the armed forces without any charge, Mr. Gass also said.

Gave Government What It Wanted

The section, he continued, employed up to 100 persons on a 24-hr. schedule. It was located in Washington's Pentagon Building in order that the armed forces could deal directly with one agency instead of several hundred different railroads. As an indication of the service performed by the section, Mr. Gass pointed out that during the war years his group handled the movement of 43,983,368 passengers traveling under military orders. This required the use of more than 1¼ million passenger cars; and troop movements originating in the section totaled almost 49½ billion passenger-miles. These military passenger movements were at a net military rate which in every case was less than regular passenger fares, Mr. Gass noted. The only instruction he got on

Against Government's Reparations Claims

Washington hearings concluded December 5; further hearing for Justice Department's rebuttal evidence set for March 20

being appointed manager of the section was to "find out what they want and get it for them," Mr. Gass told Fred D. Binkley, attorney for the Department of Justice, during the course of a brief cross-examination.

Chairman Fitzpatrick of the eastern roads' Traffic Executive Association asserted that the government profited "enormously" during World War II from freight rate reductions and other concessions made by the railroads. "Many low rates," he continued, "were established on the specific request of the government and were recognized by government agencies as special contributions of the railroads toward the war effort."

The railroads entered the war with depressed freight rates, Mr. Fitzpatrick also said, adding that these prewar rates were retained throughout the war "despite the fact that prices of most commodities had increased over previous years and that many of these increases placed a direct burden on the railroads because of the importance of railroads as consumers of many materials." Besides providing these "depressed" freight rates, Mr. Fitzpatrick went on, the railroads granted to the government numerous rate reductions through special agreements (section 22 quotations), continued to offer (through equalization agreements) voluntary land-grant rates on government freight although land-grant routes were not used, and kept in effect low export rates.

Rates Lower than Reasonable Maxima

"Justifiable profit motives, based on their revenue needs, would have warranted the discontinuance by the railroads of depressed rates and substitution of reasonable standards of rates under bases fixed by the I.C.C.," Mr. Fitzpatrick testified further. "Indeed, this is what they would have done if, as the government contends, the railroads sought to subject government traffic to rates and charges as high as, or higher than, rates which are recognized as maximum by the I.C.C."

Chairman Kerr of the Southern Freight Association put at "hundreds of millions of dollars" the savings realized by the government as a result of rate concessions granted by the railroads. Like Mr. Fitzpatrick, he took the position that these concessions reduced rates that were already depressed.

"At the beginning of the war," Mr. Kerr said, "many freight rates were depressed by competitive conditions of the 1930's that no longer existed, yet no general effort was made to increase them. Railroad action in this respect reflected a reluctance to disturb the situation of individual commercial shippers who were struggling for the first time with the complications of price control. The continuance of low freight rates greatly benefited the government on a very large volume of traffic which moved under them, and these benefits were enhanced because they were subject to any land grant deductions lawfully applied."

Land-grant deductions alone amounted to $240 million a year during the war, Mr. Kerr continued. He also indicated his view that the government failed to keep its agreements when it included so-called section 22 quotations among the assailed rates.

"These (section 22) rates," he said, "were negotiated openly by the railroads and government representatives, and the government retained the alternative right to use published tariffs, subject to land-grant deductions, if they produced a lower basis of charges. The railroads, without exception, carried out all of these agreements in good faith and adjusted their operations and accounts to their provisions, and during the entire war period all of the agencies of government with which we dealt also evidenced their acceptance of the agreements in like good faith. In no instance during that period did any railroad, or any officer of the government, indicate by action or otherwise that the numerous matters covered by the agreements were not considered to be settled and binding until changed in the same way they were made—by agreement after full discussion.

Chairman Hallmark of the western railroads' special "defense" committee discussed at some length the situation as to the export movements through Pacific ports, on which the government was unable to comply with railroad tariff rules governing the application of export rates. The railroads provided for this traffic section 22 quotations on the export-rate basis, but such agreements provided that land-grant deductions would not also apply. The government is now contending that the traffic should have had the benefit of the export rate and the land-grant deduction as well. That, Mr. Hallmark said, would have cut the section 22 rates in half, resulting in rates to the government of less than one-third those paid by commercial shippers for like movements.

Land-Grant Equalization Maintained

The S.P.'s freight traffic manager also cited benefits obtained by the government as the result of a decision by non-land-grant roads to continue equalization agreements whereby they offered to meet the rates on government traffic which land-grant roads were required to

give. He pointed out that these equalization agreements were subject to cancellation on 60 days' notice, and revealed that concellation was considered during the early stages of the war.

"It was obvious," Mr. Hallmark continued, "that even with cancellation of the agreements, the exigencies of the war would bring each of [the non-land-grant roads] a large volume of traffic, probably as much as they would haul with the continuance of the equalization agreements. Such traffic, which would pay full tariff rates, would afford them much greater net revenues than they would have if they continued to participate in the equalization agreements. Having in mind their policy to cooperate to the fullest possible extent with the government during the war period and making the entire plant of all the railroads available to the government at uniform rates regardless of the route used, the railroads concluded not to cancel these equalization agreements."

In support of the foregoing, Mr. Hallmark cited a 1944 statement by the deputy chief of the Army's Traffic Control Division who said: "There is so much traffic that the land-grant roads alone could not possibly carry it and were there no equalization agreements, probably the non-land-grant roads, if they did not equalize, would receive very little less tonnage than they receive today. ... We would have to pay land-grant rates on land-grant roads and go to tariff rates on those that did not equalize, and use them in spite of the fact that they did not equalize, because we would have more traffic than the land-grant lines themselves could carry."

Among other statements included in the railroad presentation were those of C. L. Jellinghaus, vice-president of the New York Central; C. L. Patterson, vice-president and general manager of the Lehigh Valley; H. A. De Butts, vice-president of the Southern; G. P. Brock, vice-president and general manager of the Gulf, Mobile & Ohio; R. R. Cummins, vice-president and general manager of the Central of Georgia; C. H. Sauls, general manager of the Seaboard Air Line; R. E. Hallawell, general manager of the Southern Pacific; J. B. Akers, chief engineer of the Southern; J. L. Gressitt, chief engineer of the Pennsylvania; and G. Lloyd Wilson, chairman of the Transportation and Public Utilities Department, University of Pennsylvania.

Dr. Wilson served during the war period as director of the Office of Defense Transportation's Division of Rates. His statement described wartime rate negotiations participated in by O.D.T. He was not called to the witness chair for cross-examination by the Justice Department attorneys.

Pattern of Cross-Examination

In their cross-examination of those railroad witnesses whom they did call for questioning, the Justice Department attorneys seemed to be undertaking to make a record which would support a contention that what the railroads did during the war in the way of providing special services for government traffic reflected the usual pattern of railroad operations. The inquiries seemed designed to show that special classes of traffic receive special or expedited services in normal times; and that the difference during the war period, when the most special traffic happened to be government traffic, was one of degree.

Witnesses appearing on behalf of the 49 interveners supporting the railroads included a representative of the National Industrial Traffic League—Andrew H. Brown, transportation commissioner of the Cleveland (Ohio) Chamber of Commerce. It was Mr. Brown's general contention that government shipments during World War II moved at bargain rates. "The contrast between transportation services rendered by the railroads in the first and second world wars as to quantity, quality and cost is striking—particularly as to cost where the contrast is so great as to be almost unbelievable," Mr. Brown said.

Moreover, he continued, the government received more for its money during the World War II period than did the commercial shipper. "With commercial shipments moving under full rates and with substandard service," he added, "there should be a reflection of generally unreasonable rates in the railroads' net income during the war years, if the government movement paid exorbitant charges. The figures of net return on investment do not indicate that there was an unreasonable level of charges in those years."

Actually, Mr. Brown maintained, the government should have paid more than it did for the movement of its wartime freight when it is considered that the railroad plant suffered serious deterioration as a result of wartime conditions. The reparations now sought, he said in closing, would so impair the railroads' financial standing that it would be impossible for them to complete their present rehabilitation programs. Such a situation would have a serious effect on the national defense, Mr. Brown warned.

Labor Unions and Other Interveners

Witnesses appearing on behalf of the intervening railroad labor organizations were James P. Shields, assistant grand chief engineer of the Brotherhood of Locomotive Engineers, and Harry See, national legislative representative of the Brotherhood of Railroad Trainmen. Their testimony elaborated upon the intervention petitions filed by those unions, as reported in *Railway Age* of April 2, page 48, and May 14, page 65. Among the interveners who filed statements for the record were the Railway Labor Executives' Association, Railway Business Association, Transportation Association of America, and the Railroad Security Owners Association. These presentations, too, were elaborations of intervention petitions which were noted, respectively, in the issues of May 7, page 58, July 30, page 60, April 30, page 52, and May 14, page 66.

As the hearings closed, railroad counsel expressed hope that the commission would group the remaining 12 complaints and set them for hearing as soon as possible. This pointed up the carriers' basic position that all 17 complaints should have been grouped so the prospective impact of the claimed reparations could be viewed as a whole. Department of Justice attorneys expressed a desire for early hearing on the other complaints, but their position is that each case stands alone and should receive separate consideration. That position was reflected in the general objection made by the department, at the outset of the hearings, to all railroad evidence which did not relate specifically to the rates and transit charges assailed in the five complaints.

September Purchases $122 Million

In the month of September the Class I railroads of the United States spent $110,981,000 for materials, supplies and fuels, and ordered $10,843,000 worth of equipment. Although September buying of rail and crossties fell off considerably from August purchases of the same commodities, the 9 months' purchases of these items totaled, respectively, 22 and 17 per cent above purchases in the same 1948 period.

Equipment ordered in September had an estimated value of $10,843,000. Of this amount, $517,000 is for 123 freight cars, while the balance, or $10,326,000, is the approximate cost of the 85 Diesel-electric locomotive units ordered during the month.

1949 RAILWAY PURCHASES*	September (000)	Nine Month Totals 1949 (000)	Nine Month Totals 1948 (000)
Equipment**	$ 10,843	$108,880	$511,931
Rail	8,305	86,399	70,787
Crossties	7,803	71,667	61,080
Other Material	59,552	766,894	860,043
Total from Manufacturers	$ 86,503	$1,033,840	$1,503,841
Fuel	35,321	441,031	626,317
Grand total	$121,824	$1,474,871	$2,130,158

* Subject to revision
**Amount placed on order

SEPTEMBER* PURCHASES OF MANUFACTURED GOODS (Excl. Equip. & Fuel)

Year	Sept. '49 Compared to Other Septs. (000) Amt.	% Change
1943	$83,209	— 9
1944	89,296	—15
1945	85,813	—12
1946	95,861	—21
1947	96,102	—21
1948	115,892	—35
1949	75,660	

Month	Sept. '49 Compared to Other Months '49 (000) Amt.	% Change
Jan.	$114,861	—34
Feb.	109,317	—31
Mar.	118,808	—36
Apr.	111,742	—32
May	106,593	—29
June	103,429	—27
July	95,494	—21
Aug.	89,056	—15
Sept.	75,660	

Year	Nine Month Totals '49 And Other Years (000) Amt.	% Change
1943	$622,403	+49
1944	771,887	+20
1945	743,823	+24
1946	729,892	+27
1947	912,022	+ 1
1948	991,910	— 7
1949	924,960	

SEPTEMBER* PURCHASES OF RAIL

Year	Sept. '49 Compared to Other Septs. (000) Amt.	% Change
1943	$5,613	+48
1944	5,647	+47
1945	7,691	+ 8
1946	7,220	+15
1947	7,121	+17
1948	9,383	—11
1949	8,305	

Month	Sept. '49 Compared to Other Months '49 (000) Amt.	% Change
Jan.	$ 7,361	+13
Feb.	8,637	— 4
Mar.	10,264	—19
Apr.	10,818	—23
May	9,807	—15
June	9,997	—17
July	10,953	—24
Aug.	10,257	—19
Sept.	8,305	

Year	Nine Month Totals '49 And Other Years (000) Amt.	% Change
1943	$41,574	+108
1944	56,860	+ 52
1945	56,316	+ 53
1946	43,720	+ 98
1947	64,429	+ 34
1948	70,787	+ 22
1949	86,399	

SEPTEMBER* PURCHASES OF CROSSTIES

Year	Sept. '49 Compared to Other Septs. (000) Amt.	% Change
1943	$9,032	—14
1944	7,866	— 1
1945	7,081	+10
1946	7,608	+ 3
1947	7,313	+ 7
1948	9,093	—14
1949	7,803	

Month	Sept. '49 Compared to Other Months '49 (000) Amt.	% Change
Jan.	$7,859	— 1
Feb.	7,095	+10
Mar.	8,362	— 7
Apr.	8,159	— 4
May	8,065	— 3
June	8,600	— 9
July	7,613	+ 3
Aug.	8,111	—.4
Sept.	7,803	

Year	Nine Month Totals '49 And Other Years (000) Amt.	% Change
1943	$59,995	+19
1944	65,557	+ 9
1945	54,322	+32
1946	66,068	+ 8
1947	73,705	— 3
1948	61,080	+17
1949	71,667	

SEPTEMBER* PURCHASES OF OTHER MATERIAL

Year	Sept. '49 Compared to Other Septs. (000) Amt.	% Change
1943	$68,564	—13
1944	75,783	—21
1945	71,041	—16
1946	81,033	—27
1947	81,668	—27
1948	97,416	—39
1949	59,552	

Month	Sept. '49 Compared to Other Months '49 (000) Amt.	% Change
Jan.	$99,641	—40
Feb.	93,585	—36
Mar.	100,182	—41
Apr.	92,765	—36
May	88,721	—33
June	84,832	—30
July	76,928	—23
Aug.	70,688	—16
Sept.	59,552	

Year	Nine Month Totals '49 And Other Years (000) Amt.	% Change
1943	$520,834	+47
1944	649,470	+18
1945	633,185	+21
1946	620,104	+24
1947	773,888	— 1
1948	860,043	—11
1949	766,894	

*Subject to revision

SEPTEMBER* PURCHASES OF FUEL

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)			Nine Month Totals '49 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1943	$45,702	—23	Jan.	$65,089	—46	1943	$396,901	+11
1944	43,977	—20	Feb.	57,530	—39	1944	445,374	— 1
1945	44,325	—20	Mar.	57,760	—39	1945	418,943	+ 5
1946	51,148	—31	Apr.	49,848	—29	1946	405,916	+ 9
1947	56,172	—37	May	52,391	—33	1947	492,017	—10
1948	69,743	—49	June	45,403	—22	1948	626,317	—30
1949	35,321		July	36,946	— 4	1949	441,031	
			Aug.	40,743	—13			
			Sept.	35,321				

SEPTEMBER* TOTAL PURCHASES (Excl. Equip.)

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)			Nine Month Totals '49 And Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1943	$128,911	—14	Jan.	$179,950	—38	1943	$1,019,304	+34
1944	133,273	—17	Feb.	166,847	—33	1944	1,217,261	+12
1945	130,138	—15	Mar.	176,568	—37	1945	1,162,766	+17
1946	147,009	—25	Apr.	161,590	—31	1946	1,135,808	+20
1947	152,274	—27	May	158,984	—30	1947	1,404,039	— 3
1948	185,635	—40	June	148,832	—25	1948	1,618,227	—16
1949	110,981		July	132,440	—16	1949	1,365,991	
			Aug.	129,799	—14			
			Sept.	110,981				

SEPTEMBER* INVENTORIES OF RAIL

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
Sept. 1, 1943	$19,558	+100	Jan. 1	$33,243	+17
1944	22,324	+ 75	Feb.	36,408	+ 7
1945	25,611	+ 53	Mar.	39,054	
1946	25,192	+ 55	Apr.	42,681	— 8
1947	29,766	+ 31	May	41,264	— 5
1948	32,212	+ 21	June	38,365	+ 2
1949	39,057		July	36,486	+ 7
			Aug.	37,162	+ 5
			Sept.	39,057	

SEPTEMBER* INVENTORIES OF SCRAP

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
Sept. 1, 1943	$ 8,607	+ 87	Jan. 1	$18,849	—14
1944	10,292	+ 58	Feb.	18,735	—13
1945	13,979	+ 16	Mar.	18,532	—12
1946	11,546	+ 41	Apr.	18,872	—14
1947	9,978	+ 63	May	17,936	— 9
1948	15,927	+ 2	June	16,877	— 4
1949	16,241		July	16,535	— 2
			Aug.	15,939	+ 2
			Sept.	16,241	

SEPTEMBER* INVENTORIES OF CROSSTIES

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
Sept. 1, 1943	$59,185	+ 56	Jan. 1	$94,256	— 2
1944	71,306	+ 29	Feb.	94,164	— 2
1945	62,070	+ 48	Mar.	98,833	— 7
1946	74,454	+ 24	Apr.	101,987	—10
1947	83,771	+ 10	May	101,641	— 9
1948	78,309	+ 18	June	94,615	— 3
1949	92,126		July	96,167	— 4
			Aug.	92,476	
			Sept.	92,126	

SEPTEMBER* INVENTORIES OF FUEL

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
Sept. 1, 1943	$61,204	+ 17	Jan. 1	$96,900	—26
1944	67,538	+ 6	Feb.	91,831	—22
1945	55,333	+ 29	Mar.	88,647	—20
1946	51,944	+ 37	Apr.	82,014	—13
1947	63,026	+ 13	May	81,686	—13
1948	91,850	— 22	June	83,436	—14
1949	71,341		July	81,567	—13
			Aug.	75,954	— 6
			Sept.	71,341	

SEPTEMBER* INVENTORIES OF OTHER MATERIAL

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
Sept. 1, 1943	$376,180	+ 58	Jan. 1	$611,864	— 3
1944	427,277	+ 39	Feb.	626,423	— 5
1945	448,110	+ 33	Mar.	636,700	— 6
1946	464,973	+ 28	Apr.	647,641	— 8
1947	555,498	+ 7	May	642,872	— 7
1948	611,861	— 3	June	634,929	— 6
1949	595,665		July	623,281	— 4
			Aug.	613,685	— 3
			Sept.	595,665	

SEPTEMBER* TOTAL INVENTORIES†

Sept. '49 Compared to Other Septs. (000)			Sept. '49 Compared to Other Months '49 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
Sept. 1, 1943	$524,734	+ 55	Jan. 1	$855,112	— 5
1944	598,737	+ 36	Feb.	867,561	— 6
1945	605,103	+ 35	Mar.	881,766	— 8
1946	628,109	+ 30	Apr.	893,195	— 9
1947	742,039	+ 10	May	885,399	— 8
1948	830,159	— 2	June	868,222	— 6
1949	814,430		July	854,036	— 5
			Aug.	835,216	— 2
			Sept.	814,430	

*Subject to revision

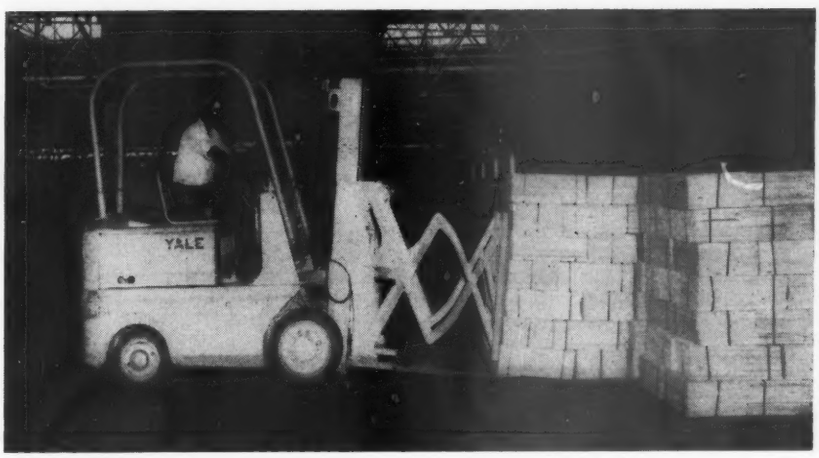
†All total inventory figures taken from I.C.C. statement M-125 for the month indicated

New and Improved Products of the Manufacturers

Pak-Loader Fork Truck System

A new method for handling boxes, barrels, bales, drums and cartons in multiple units, without the use of pallets but by means of the fork truck, was announced recently by Yale & Towne Manufacturing Co., Philadelphia Division, Roosevelt Blvd. and Haldeman Ave., Philadelphia 15, Pa.

This new system includes two components—fork trucks equipped with pusher devices and two or three specially adapted steel plates per fork truck. When plates are loaded they are picked up by the fork truck and taken to the place for unloading. A locking device holds the plate on the forks while the load is being pushed onto the car or warehouse floor. The plate is then returned for loading and another picked up. Plates are cut to the size which best fits the specific load to be handled.



A load is being shoved off a steel plate which a locking device holds on the forks to prevent its being pushed off with the load. The legs on the under side of the plate are plainly visible. When the plate is being loaded a block is placed under the toe to keep it level

Fairmont Motor Car For Track or Highway

A new motor car, known as the Hy-Rail, for transporting men and equipment either on the track or on the highway, as desired, has been announced by Fairmont Railway Motors, Inc., Fairmont, Minn. It is a pneumatic-tired vehicle with hydraulically controlled flanged guide wheels front and rear, which, in track operation, serve to position the car on the rails. When operated on the track the full load is normally carried on the pneumatic tires for better traction and better riding qualities. In cases of emergency, however, the guide wheels have ample strength to carry the full load.

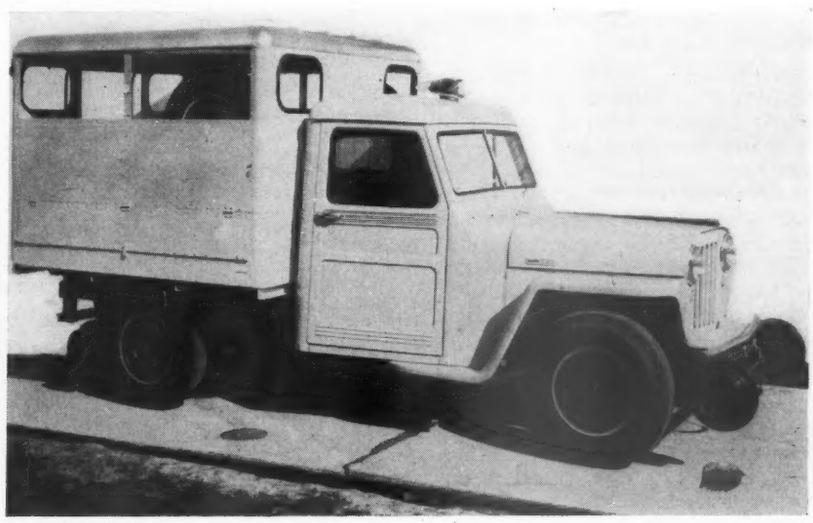
The motor car can be moved from the track quickly and easily by one man. To do so, the operator, from his seat in the cab, unlocks the steering wheel, raises the guide wheels and drives off the rails. Grade crossings are the ideal set-off locations. However, the car has ample power to climb over the rails and, therefore, can be set off between crossings, if necessary. Each unit is equipped with rerailers, by means of which it can be set on the track between crossings.

The car has a 4-cylinder, 63-hp. Willys-Overland engine with a transmission having three speeds forward, one in reverse and an auxiliary low gear. Either two-wheel or four-wheel drive is available.

The on-track mechanism, hydraulically controlled by levers in the cab, consists of a continuous pump, valves, pressure gage, guide wheels, supports and a manual steering wheel lock. The hydraulic valves have mechanical locks to hold them in an extended position when the guide wheels are down.

The car is available in two models. One of these, known as the A30 Series A work car, is equipped with a fully inclosed cab and separate aluminum body with safety-glass windows, front and rear, and rail curtains for side openings and rear door opening. The cab and body are connected with a speaking tube. This model has seating space for 10 men, a load capacity of 2,200 lb. and net weight of 4,400 lb.

The other model, known as the A31 Series A inspection car, is equipped with an all-steel, station-wagon type of body with seating space for six men and a luggage space in the rear.



The Fairmont A30 Series A Hy-Rail work car. The car is also available with a station-wagon type of body

GENERAL NEWS

10 Months Net Income Totaled $303,000,000

Net railway operating income was $541,606,772

Class I railroads in the first 10 months of 1949 had estimated net income, after interest and rentals, of $303,000,000, compared with $590,000,000 in the corresponding period of 1948, according to the Bureau of Railway Economics of the Association of American Railroads. The 10-months net railway operating income, before interest and rentals, was $541,606,772, compared with $853,624,669.

Estimated results for October showed a net income of $24,000,000, compared with $85,000,000 for October, 1948, while net railway operating income for the 1949 month was $46,785,556, compared with $110,876,857 in October, 1948. In the 12 months ended with October, the rate of return averaged 2.92 per cent, compared with 4.36 per cent for the 12 months ended with October, 1948.

Gross in the 10 months amounted to $7,157,057,887 compared with $8,039,696,497 in the same period of 1948, a decrease of 11 per cent. Operating expenses amounted to $5,774,410,418 compared with $6,185,340,861, a decrease of 6.6 per cent.

Twenty-nine Class I roads failed to earn interest and rentals in the 10 months of which 14 were in the Eastern district, 4 in the Southern region, and 11 in the Western district.

October Deficit in East

Class I roads in the Eastern district in October had an estimated deficit of $10,000,000 compared with net income of $35,000,000 in October, 1948. In the 10 months, their estimated net income was $76,000,000 against $227,000,000 in the same period of 1948. Their net railway operating income in October amounted to $2,744,691 compared with $49,367,865 in October, 1948. In the 10 months of 1949 they had a net railway operating income of $209,544,502 compared with $368,033,110 in the same period of 1948.

Gross in the Eastern district in the 10 months totaled $3,177,757,941, 13.3 per cent under the same period of 1948. Operating expenses totaled $2,631,890,470, a decrease of 8.8 per cent.

Results in the South

Class I roads in the Southern region in October had an estimated net income of $5,000,000 against $8,000,000 in October, 1948. In the 10 months, their estimated net income was $45,000,000 compared with $78,000,000 in the same period of 1948. Those roads in October had a net railway operating income of $7,819,432 compared with $11,083,061 in October, 1948. Their net railway operating income in the 10 months was $82,068,341 compared with $115,789,277 in the same period of 1948.

Gross in the Southern region in the 10 months totaled $982,243,808, 10.4 per cent below the same period of 1948, while operating expenses totaled $791,880,552, a decrease of 7.1 per cent.

In the West

Class I roads in the Western district in October had an estimated net income of $29,000,000 compared with $42,000,000 in October, 1948. Their estimated net income in the 10 months was $182,000,000 compared with $285,000,000 in the same period of 1948. Their net railway operating income in October amounted to $36,221,433 compared with $50,425,931 in October, 1948. In the 10 months they had net railway operating income of $249,993,929 against $369,802,282 in the same period of 1948.

Gross in the Western district in the 10 months totaled $2,997,056,138, 8.5 per cent under the same period of 1948, while operating expenses totaled $2,350,639,396, a decrease of 3.9 per cent.

CLASS I RAILROADS—UNITED STATES

MONTH OF OCTOBER

	1949	1948
Total operating revenues	$ 648,924,128	$ 878,120,864
Total operating expenses	520,919,600	651,909,449
Operating ratio—per cent	80.27	74.24
Taxes	65,375,827	100,778,745
Net ry. op. income (Earnings before charges)	46,785,556	110,876,857
Net income, after charges (est.)	24,000,000	85,000,000

TEN MONTHS ENDED OCTOBER 31, 1949

Total operating revenues	$7,157,057,887	$8,039,696,497
Total operating expenses	5,774,410,418	6,185,340,861
Operating ratio—per cent	80.68	76.94
Taxes	701,260,353	856,620,934
Net ry. op. income (Earnings before charges)	541,606,772	853,624,669
Net income, after charges (est.)	303,000,000	590,000,000

Whittemore Resigns as President of New Haven

Laurence F. Whittemore, who has been president of the New York, New Haven & Hartford since September 1, 1948, has asked to be relieved of the presidency of that railroad, effective December 21, "to assume another position in a field in which he has been especially interested for many years."

Mr. Whittemore's resignation was announced by Frederic C. Dumaine, Sr., chairman of the board of the New Haven, who said that it would be accepted "with sincere regret." His successor, Mr. Dumaine's statement added, would be named at a later date by the directors. Mr. Whittemore's own statement said that the nature of his new position "would be announced shortly."

SKF Holding 2-Day Courses On Diesel Locomotive Bearings

A series of two-day courses in service inspection of anti-friction bearing installations in traction motors of Diesel-electric locomotives has been inaugurated by SKF Industries for railroad personnel who service such engines. Supervisory personnel of eastern railroads, including shop foremen and superintendents, locomotive inspectors and mechanics, were represented at the initial session on December 6 and 7 at SKF's main plant in Philadelphia, Pa. Representatives of railroads in other sections of the country will be invited to attend future sessions.

Western Roads Establish "Streamlined" Mixture Rule

The Interstate Commerce Commission, by voting not to suspend, permitted a "streamlined" Rule 10 (mixture rule) for western railroads to go into effect on December 1. The commission's action was taken with reference to tariff schedules filed by the carriers "proposing exception to Rule 10 of the Western Classification applicable on commodities, in mixed carloads, within and between points in Southwestern and Western Trunk Line territories; between Southwestern and Southern territories; also between W.T.L. territory and points located west thereof to the border of Transcontinental territory."

Rule 10, as originally applied, provided that various commodities shipped in mixed carloads be subject to the

highest rate and highest minimum weight on any article in the carload. The revised rule "contemplates shipments of various commodities in mixed carloads, subject to the carload rate on each, but subject to the highest minimum weight of any article in the carload." Such a "streamlined" Rule 10 already is applicable in Official and Southern territories and inter-territorially between them.

Prior to the commission's action permitting the revised Rule 10 to go into effect, objections were filed by several midwestern and southern groups and by the Nebraska State Railway Commission. Principal cause for objection was the fear that such a revised rule would do away with l.c.l. freight in many cases, and would authorize mixing commodities without regard to type.

In reply to these protests, the western roads noted that neither manufacturers nor retailers were protesting the "streamlined" rule, and said such a revised rule was necessary to help the roads meet truck competition from jobbing points. They added that it was contemplated the revised Rule 10 would be published inter-territorially if and when concurrences are received from carriers in other territories.

Transit Authorities Favored, Opposed in New York Talks

The only answer to the problem of "hopelessly unprofitable" short-haul commuter traffic is the creation of transit authorities exempt from payment of local taxes but with authority to raise fares to compensatory levels, Patrick B. McGinnis, chairman of the board of the Norfolk Southern, told the New York Lions Club in a luncheon address on November 28.

Two days later, before the Insurance Federation of New York, Governor Thomas E. Dewey pointed out that the proposal to "put the Long Island Rail Road in an authority" would cost Long Island communities "$5 million yearly" in real estate taxes. Decrying the trend away from private enterprise, the governor attacked operation of New York City subways as a "shining example" of poor management under government ownership. His comment on creation of a Long Island transit authority was apparently not intended as a reply to Mr. McGinnis' statement, but seemed designed only to indicate his general opposition to the suggestion of a Long Island transit authority, and his intention, "so long as I am governor," not to "collectivize any business."

Mr. McGinnis' talk was on "What Railroads Mean to New York City." In it, he pointed out that the New York Central and Pennsylvania are among the city's biggest taxpayers, and were largely responsible for developing the areas around Grand Central and Pennsylvania stations. He also condemned the 15 per cent federal tax on passenger fares as a major factor in the competition which the railroads encounter from private automobile travel.

TOUR SEASON FOR UNION PACIFIC'S AGRICULTURAL IMPROVEMENT CAR—Western farmers—and future farmers—with a few moments of post-harvest leisure will have an opportunity to visit the Union Pacific's agricultural development department's demonstration car, now on its third tour of rural communities. Four daily forums of 1½ hours each, featuring faculty members of appropriate agricultural colleges, and instructive motion pictures, are held at each stop. The car seats 70 on leather upholstered aluminum tubing seats. A representative of the road's agricultural department travels with the car when it is in his territory, and occupies living quarters in the forward end

Hayghe Offers Plan to Speed War Freight and Carrier Pay

To expedite payment of freight charges by the government in another national emergency, and save man-hours, William E. Hayghe, chief of the Central Traffic Service, Bureau of Federal Supply, outlined at a November 29 dinner meeting of the Washington chapter of the National Defense Transportation Association a plan which he believes would eliminate the time-consuming method of paying freight bills followed in the last war.

Mr. Hayghe's plan, which he said is not in finished form and could be effected only through legislation, would provide that payments on government war freight be deferred until a special committee of representatives of government shipping agencies, the Interstate Commerce Commission, and the carriers could review freight bills to determine the reasonableness of rates and charges. The findings of the committee would be absolute, and would thus eliminate "millions of man-hours" spent in World War II in billing and rating military shipments, only to have the results subject to change.

The plan was advanced, Mr. Hayghe said, mainly "to start some thinking," in the hope of bringing about conditions that would speed up movement of government freight in wartime and at the same time simplify and speed payments to carriers. Under the proposed arrangement neither the General Accounting Office, the I.C.C., the Justice Department, nor the carriers would review payments authorized by the special committee.

The Odor Penetrates

During the past five years the New York Central has equipped the journal boxes of over 3,400 passenger-train cars and about 250 steam and Diesel locomotives with the Twinplex hot-box alarm, a description of which appeared on page 504 of the March 9, 1946, *Railway Age*. Approximately one-quarter of the cars have roller bearings.

The alarms consist of two cartridges, from one of which a thick white smoke

is discharged when a roller bearing reaches a temperature of 250 deg. F., or a plain bearing reaches a temperature of 350 deg. F. From the other, a penetrating and unpleasant odor is released at the same time.

Early in November road tests were run on two regular passenger trains to determine whether the odor released by a bearing approaching an overheated state is plainly noticeable in all cars of a passenger train except those ahead of the car in which the hot box occurs. For the purpose of the test a combination passenger-baggage car was provided with a detached 5½-in. by 10-in. journal box with a tightly fitting lid. This box was suspended under the car body near one of the trucks at approximately the same height and distance from the longitudinal center line of the car as the journal boxes on the trucks. A regular journal brass for use with the Twinplex alarm was mounted in the top part of the box. Heater coils were placed around the cartridge cavities in the brass and connected to the 32-volt car battery through switches in the passenger compartment of the car. The back of the box was closed and the bottom filled with asbestos cement to support the brass in its normal position.

Smoke cartridges were omitted during this test as it was undesirable to have the train stopped by a tower man or other roadside observer when the alarm was discharged. The test runs were between New York and Albany. On the westbound trip there were five coaches behind the test car. On the eastbound trip, there were 11 cars behind the test car, of which two were sleeping cars, one a diner, one a lounge, and one an observation-lounge. All were air conditioned.

Observers were stationed in all cars behind the test car and with the train running at 80 m.p.h. the switch on the bearing heating circuit was closed. The observers noted the time at which the odor from the alarm cartridge was first noticed within the cars. On both runs the odor was unmistakably present in all cars back of the test car. The times at which it was first noticed by the various observers from the first to the last car behind the test car were separated by a matter of a few seconds. The odor disappeared in about five minutes.

On the day of the tests the weather was fair and temperatures ranged between 50 and 70 deg. F.

Rail Leaders View Test of Coal-Burning Gas Turbine

Presidents of nine leading coal-carrying railroads and five major coal-producing companies, at Dunkirk, N. Y., on December 7, saw a locomotive-size gas turbine operating with pulverized coal as its fuel.

According to President R. B. White of the Baltimore & Ohio, and chairman of the Locomotive Development Committee of Bituminous Coal Research, Inc., the tests have shown that pulverized coal can be fed continuously to a combustion chamber and burned efficiently under a pressure of 60 lb. per sq. in.

"While it would be premature to assume that all of the technical problems are solved," Mr. White said, "the tests have shown that bituminous coal can operate a gas turbine. We are particularly pleased with the combustion efficiency, in excess of 90 per cent, and also with the performance of the ash removal equipment. Inspection of the experimental turbine following a 38-hr. run — equivalent to a round-trip by rail between New York and Chicago — showed that all components of the coal-burning gas turbine power plant were in excellent condition."

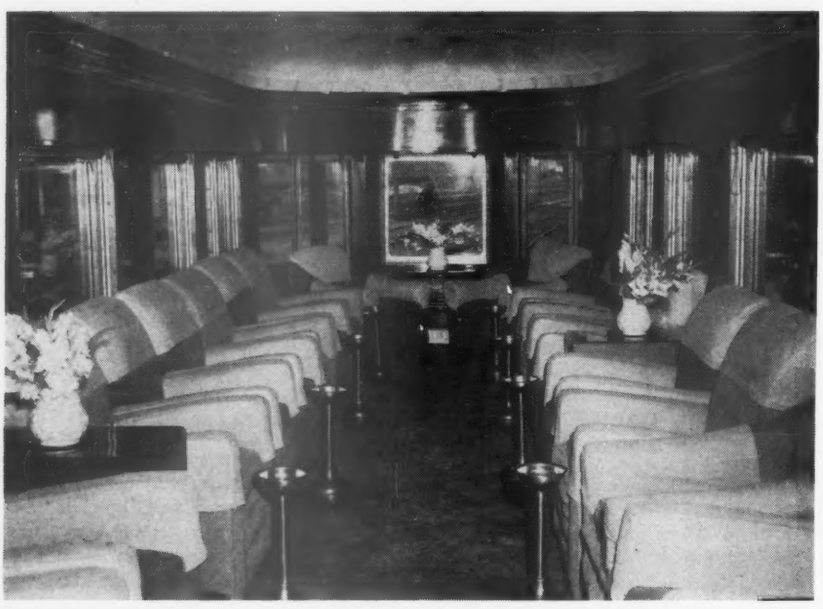
The coal-burning gas turbine has only three major components — the compressor, the combustor and the turbine. The gas which drives the turbine is superheated air. The gas turbine is simple, compact, requires minimum lubrication and attention, operates without smoke, and eliminates need for water.

Industrial leaders viewing the tests were luncheon guests of R. B. McColl, president of the American Locomotive Company, whose Dunkirk plant was used by the committee for installation of the full-scale stationary experimental gas turbine.

Laboratory work leading up to the tests has been carried on under the supervision of J. I. Yellott, director of research for the Locomotive Development Committee, by a number of organizations including Battelle Memorial Institute at Columbus, Johns Hopkins University at Baltimore, the Institute of Gas Technology in Chicago, and the Turbodyne Corporation at Hawthorne, Cal.

The turbine under test at Dunkirk was made available to the committee by the U. S. Bureau of Mines. The Allis-Chalmers Manufacturing Company, builders of the experimental turbine now in use at Dunkirk, has just completed the gas turbine which is destined to power the first coal-burning gas turbine locomotive. A second power unit, on order with the Elliott Company of Jeannette, Pa., is expected to be completed next spring.

Sponsors of the Locomotive Development Committee are the Baltimore & Ohio, the Chesapeake & Ohio, the Illinois Central, the Louisville & Nashville, the New York Central, the Norfolk & Western, the Pennsylvania, the Virginian and the Wheeling & Lake Erie. Coal supporters are the Island Creek Coal Company, the M. A. Hanna Company, the Pittsburgh-Consolidation Coal Company, the Pocahontas Fuel Company and the Sinclair Coal Company.



Interior of the all-steel, air-conditioned parlor-observation car of Australia's luxury train, the "Spirit of Progress," which makes a daily express trip on the Melbourne-Albury leg of the interstate run between Melbourne and Sydney

B. L. E. Rejects Amalgamation With B. L. F. & E.

Official tabulation of votes on the proposal for amalgamation of the Brotherhood of Locomotive Firemen & Enginemen and the Brotherhood of Locomotive Engineers shows that the plan, while overwhelmingly accepted by the former union, was decisively rejected by the latter. The B. L. F. & E. vote, according to the December issue of the union magazine, was 68,932 for, and 4,009 against, amalgamation. The B. L. E., on the other hand, voted 19,290 for, and 37,-

922 against, the plan, with 22,353 members not voting. Merger of the insurance funds of the two unions, also accepted by the B. L. F. & E., was even more decisively rejected by insured members of the B. L. E.

The proposal for amalgamation of the two organizations was reported in the *Railway Age* of April 9, page 63.

Freight Car Loadings

Loadings of revenue freight in the week ended December 3 totaled 693,923 cars, the Association of American Railroads announced on December 8. This was an increase of 29,368 cars, or 4.4 per cent, above the previous week, a decline of 110,249 cars, or 13.7 per cent, below the corresponding week last year, and a drop of 184,665 cars, or 21.0 per cent, under the equivalent 1947 week.

Loadings of revenue freight for the week ended November 26, which included the Thanksgiving Day holiday, totaled 664,555 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, November 26

District	1949	1948	1947
Eastern	114,100	129,511	144,193
Allegheny ..	127,535	150,709	168,028
Pocahontas .	65,292	56,211	61,195
Southern ..	114,564	112,319	126,862
Northwestern	71,740	98,936	99,577
Central Western	113,175	113,393	128,246
Southwestern	58,149	61,857	64,230
Total Western Districts ..	243,064	274,186	292,053
Total All Roads	664,555	722,936	792,331
Commodities:			
Grain and grain products .	42,208	45,393	43,851
Livestock ..	10,719	11,636	13,797
Coal	180,898	144,589	173,085
Coke	11,180	15,387	14,743
Forest products	35,582	33,490	40,697
Ore	16,553	43,189	34,992
Merchandise l.c.l.	72,752	90,283	103,357
Miscellaneous	294,663	338,969	367,809
November 26	664,555	722,936	792,331
November 19	758,972	858,089	902,662
November 12	635,823	871,679	878,283
November 5	578,981	843,586	910,170
October 29..	591,317	930,973	940,746
Cumulative total 47 weeks ..	32,788,333	39,183,882	40,650,529

In Canada.—Carloadings for the week ended November 26 totaled 78,972 cars, compared with 82,950 cars for the previous week, and 85,313 cars for the corresponding week last year according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
November 26, 1949..	78,972	29,441
November 27, 1948..	85,313	34,172
Cumulative totals for Canada:		
November 26, 1949..	3,567,277	1,451,760
November 27, 1948..	3,695,605	1,630,208

Retires from I.C.C. Staff

Frank C. Weems, who had been a hearing examiner on the Interstate Commerce Commission's staff for more than 24 years, retired from that position on November 30. Before joining the commission's staff, where his entire period of service totaled 40 years, Mr. Weems had been employed by the Baltimore & Ohio. On the day of his retirement, he was admitted to practice before the commission.

THE NEWS
NEW YORK'S PICTURE NEWSPAPER
220 EAST FORTY SECOND STREET
NEW YORK 17, N.Y.
MURRAY HILL 2-1234

Dear Mr. Railroadman:

We are the receivers of rolls of newsprint paper in box cars. Our one newspaper has been receiving about 600 carloads a month representing railroad revenue of approximately $180,000 a month. These rolls of paper are round when they leave the mills. They are loaded into the cars with care and secured against moving in the cars under normal conditions while in transit.

Recently, we have had a great many of these rolls flattened to the extent of crushing the cores. These rolls are of no use to us on our speed presses. They can be rewound, but this is an unnecessary cost and not only reduces railroad revenue on account of claims for damage, but also causes great concern to the receivers. All evidence indicates that these cars received rough handling in transit.

This has caused so much concern that the receivers have been endeavoring to investigate the possibilities of shipping paper by water transportation to a greater extent than ever before. Prior to the war, it was a well-known fact that the rolls suffered another kind of damage; namely, cuts and bruises, but very little flat rolls while being transported by water. During the past two years, the water transporters have improved their vessels and their handling with an eye to capturing as much of the rail business as they can by offering special boats, better handling and reduced costs.

I know that any real improvement depends on the men who operate the trains. Without their help, improvement cannot be achieved!

As a former trainman with more than 35 years of experience in the transportation field, I am trying to make these facts known to the men who are vitally interested in keeping this business on the rails. I was on the "extra board" for ten years and I know what it means when there are no cars to move.

Very truly yours,

NEWS SYNDICATE CO. INC.

J. J. Brown

J. J. Brown
Traffic Manager

CC: National Freight Loss & Damage Prevention Committee
Mr. C. C. Beauprie, Secretary
Freight Claim Division
Association of American Railroads
59 East Van Buren Street, Chicago 5, Illinois

A trainman for 35 years and now traffic manager of the New York News, J. J. Brown drew from his own firm's experience this example with which to ring the tocsin in connection with diversion of traffic from the railroads. The Freight Claim Division, Association of American Railroads, rated Mr. Brown's memorandum to railroadmen of such import as to warrant widespread distribution throughout the industry

C.I.O. Union Retains Right To Represent 5 P.R.R. Crafts

Certifying results of a recent election involving more than 46,000 shopmen employed by the Pennsylvania, the National Mediation Board has determined that the International Union of Marine and Shipbuilding Workers, an affiliate of the Congress of Industrial Organizations, will continue as collective-bargaining representative of five of the six P.R.R. craft groups that it previously represented. At the same election, organizations functioning through the Railway Employees Department, American Federation of Labor, won the right to represent three groups, including sheet metal workers, the group lost by International.

The five groups retained by the latter, which is "successor by merger" to the C.I.O.'s United Railroad Workers of America, are electrical workers, carmen (including coach cleaners), boilermakers, molders (including melters and coremakers), and powerhouse employees and railway shop laborers. The A.F. of L. unions involved were the International Association of Machinists, International Brotherhood of Blacksmiths, Drop Forgers and Helpers, and Sheet Metal Workers International Association. It was the latter which won the right to represent the sheet metal workers, while the other

two, in turn, won rights to represent the machinists and blacksmiths.

These two crafts had formerly been represented by the Brotherhood of Railroad Shop Crafts of America, which did not participate in the election. Of the 46,000 employees eligible, more than 35,000 voted. The closest vote was in the contest involving representation of the electrical workers which the C.I.O. union won 1,366 to 1,335.

Agriculture Department Raps Rail Service to Senate Group

Charges of car delays, high freight rates, poor service, and general operating inefficiences were laid at the door of the railroads during hearings before a subcommittee of the Senate Agriculture and Forestry committee in Washington, D. C., on December 1.

John I. Thompson, assistant administrator of the Production and Marketing Administration, Department of Agriculture, appeared as witness before the Subcommittee on Utilization of Farm Crops headed by Senator Gillette, Democrat of Iowa. Mr. Thompson's testimony was largely concerned with farm-to-market transportation as he attempted to explain the spread between how much a farmer receives of the consumer dollar spent for his product and how much of that dollar goes elsewhere.

Granting that in the matter of delayed cars the railroads are often handicapped by conditions beyond their control, Mr. Thompson nevertheless expressed concern over the "periodical car shortages that have been prevalent since the war." Referring to a special study made by the P.M.A. of approximately 23,000 freight cars, the witness said the study "disclosed that approximately 85 per cent were delayed one day or longer. The average delay of all cars delayed was 3.2 days, with approximately 35 per cent of the cars requiring double the normal transit time or longer." This study by the P.M.A. has been conducted through the last year and a half, and the information is much the same as that presented by the Agriculture Department to the Interstate Commerce Commission in the Ex Parte 168 freight-rate case.

Mr. Thompson said further, in relation to car service, that if turn-around time everywhere were cut down by one day the result would equal the addition of 117,000 cars to the railroads, yet would mean 117,000 less to maintain. He said the Marketing Administration is now conducting a study with citrus shippers and auction companies at the markets to determine principal points where car delays occur and the causes for such delays.

Referring to these studies by the Agriculture Department which seek to analyze railroad efficiency and operation, the chairman, Senator Gillette, remarked that such research probably wouldn't turn up anything the railroads don't already know. "They know the condition of their rolling stock and they know the conditions of their roads. They know there are delays, and the Interstate Commerce Commission knows it, too . . . They have the authority to crack down and correct those conditions instead of trying to remedy them by raising freight rates so as to soak the shipper . . . It seems to me that the dereliction there is . . . on the part of both the I.C.C. and the railroads themselves. If they want to go out of business and let the motor carriers take over, perhaps there is nothing we can do about it."

Turning to freight rates, Mr. Thompson expressed the opinion that Agriculture Department intervention before the I.C.C. in rate cases had helped keep rail rates lower than what the carriers asked. Replying then to questions by Paul E. Hadlick, counsel for the subcommittee, Mr. Thompson said that the presentations to the I.C.C. have related to economic factors in agriculture commodities, reducing consumption and shipments, "and not a study of whether the carriers could become more efficient in themselves." In this connection Senator Gillette suggested that "this practice of coming in every few months and saying revenues are reduced and we cannot carry on unless we have a rate increase which in turn is charged to our people, seems to me to be a deplorable method of proceeding, especially in view of inefficiencies that have been pointed out."

Mr. Thompson said, in his opinion, the railroads were well aware of the problem and said "I think they will welcome any help that can be given them." He has noted some improvement in rail service from the time the Agriculture Department studies began until September 1 of this year, when the 40-hour week for non-operating employees went into effect. Since that date there has been evidence of slower movements, he said, due to changes in operating routine and cutting operating forces to offset increased costs. While Mr. Thompson noted that the 40-hour week was beyond the carriers' ability to correct, Senator Young (Republican of North Dakota) of the subcommittee expressed the belief that the 40-hour week was costing the railroads considerable business. "In rural areas the stations close altogether on weekends, whereas trucks work six or seven days a week," he said.

In the matter of the claimed poor service by rail carriers, the witness again called attention to such things as industry-choked yards that have no room to expand, and to extra-long trains which stand in the way of speedier car handling at terminals. He said, however, that the "tide of necessity" will force the carriers "to provide better service or lose a substantial part of their tonnage." He illustrated the loss-of-traffic trend by the Florida citrus movement to eastern markets where in 1947 trucks hauled 29 per cent of the tonnage for the first five weeks of the harvest. In 1948 they hauled 40 per cent and in 1949, 66 per cent. "The railroads are going to be forced to take drastic steps to prevent further losses and recover some of what has already been taken away," he said.

Concluding testimony by Mr. Thompson was relative to improved equipment, particularly studies being made to develop a new self-unloading hopper car for grain that is expected to speed car turn-around time during the grain harvests, and a new mechanical-unit refrigerator car that is now being tested in service.

New York RR Club to Hold Second Wright Essay Contest

"To encourage constructive thought on railroad problems by young people in railroad work and by students of transportation" the New York Railroad Club is again conducting the Roy V. Wright Prize Competition for the best essays on important transportation subjects.

Papers entered in the contest must be between 2,500 and 7,000 words in length; must be on one of 15 topics outlined by the club in its announcement of the contest, unless special permission is given to enter an essay on another subject; and must reach the club not later than February 28, 1950. There will be a first prize of $500 and 10 other prizes of $100 each in place of the first, second and third prizes awarded in the 1948-1949 contest. Names of judges will be announced later.

James G. Lyne, editor of *Railway Age*, is chairman of the club committee in charge of the contest, but all inquiries should be addressed, and all papers sent, to the club's executive secretary, David W. Pye, at 30 Church street, New York 7.

Railroads Will Advise Water Lines of 4th-Section Proposals

Railroads have agreed voluntarily to furnish copies of their applications for fourth-section relief to water carriers competing for the traffic involved. This was revealed by W. P. Bartel, secretary of the Interstate Commerce Commission, in a December 6 notice which said that the commission had "informally" requested such an agreement from the railroads after finding "inappropriate" a proposed amendment to its General Rules of Practice, that would have required service of the applications on interested water lines.

The Bartel notice also said that arrangements had been made by the commission for daily publication in the Federal Register of a summary of all fourth-section applications filed. Meanwhile, the daily summary furnished through Mr. Bartel's office will also

be continued. The proposed amendment to the General Rules of Practice was thought "inappropriate," Mr. Bartel said, "because competition forming the basis for relief sought is not always limited to water carriers, but is often founded upon the competition of carriers, by land or water, not subject to regulation under the Interstate Commerce Act."

U. S. Chamber's Transport Group Makes Recommendations

The Transportation and Communication Department Committee of the Chamber of Commerce of the United States has recommended that the chamber take the position that airports "should be placed on a self-sustaining basis as soon as possible, by establishing charges proportionate to their use by military forces, commercial carriers and private operators." This recommendation was among several adopted by the committee at a recent meeting and submitted to the chamber's board of directors, which will study them before placing them before the membership at the next annual meeting.

The other committee recommendations relating to air transport would have the chamber go on record in favor of separating subsidies to air lines from air-mail pay, and limiting federal aid to airports to a system of airports "used primarily for traffic in interstate commerce." With further reference to airports, the committee had this to say: "Airport buildings should be eligible for federal funds, together with land preparation, runway construction, lighting and radio aids to navigation, but facilities utilized entirely by private operators, such as hangars, should not be built at public expense."

As to highways, the committee recommended that the chamber approve the toll method of financing roads "where the project is sanctioned by state authorities provided need for the proposed road can be proved as economically feasible." Another highway recommendation was that the "traditional 50-50" federal-aid basis "should not be increased . . . as was recently proposed by the U. S. Bureau of Public Roads for the interstate highway system." The committee is also opposed to "special aid by earmarking federal funds for local farm roads . . . because these roads are purely local (state-county) responsibilities."

B. L. F. & E. Won't Strike Now for Extra Firemen

David B. Robertson, president of the Brotherhood of Locomotive Firemen & Enginemen, announced at Cleveland, Ohio, last week that his organization would delay, pending further negotiations with the railroads, the nation-wide strike which he threatened to call following rejection by a Presidential fact-finding board of the union's demands for employment of additional firemen on Diesel locomotives. (See *Railway Age* of September 24, page 52.)

Heading for the roundhouse at Potomac Yard, Alexandria, Va., are members of the student section of the American Society of Civil Engineers, making a tour of some of the railroad facilities around Washington, D. C., as guests of the Southern and the Richmond, Fredericksburg & Potomac. The all-day tour, a feature of the program for student members at the A. S. C. E.'s November convention in Washington, led the student engineers through Potomac Yard and the Southern's Diesel shop, Diesel instruction car and testing laboratory at Alexandria

Additional General News appears on pages 84 and 86.

ORGANIZATIONS

A.S.M.E. Railroad Division Installs New Officers

The American Society of Mechanical Engineers, Railroad Division, which held five technical session in conjunction with its annual meeting at New York, November 29 to December 1, inclusive, installed the following officers for the ensuing year: Chairman, K. A. Browne, research consultant, Chesapeake & Ohio, Cleveland, Ohio; executive committee members, E. D. Campbell, American Car & Foundry Co. (retired); C. H. Beck, vice-president, Westinghouse Air Brake Company, Wilmerding, Pa.; C. E. Pond assistant to superintendent of motive power Norfolk & Western, Roanoke, Va., and G. W. Bohannon, chief mechanical officer, Chicago & North Western, Chicago; and secretary, E. L. Woodward, western mechanical editor, *Railway Age*, Chicago. A formal certificate of appreciation was tendered to retiring Chairman B. S. Cain, assistant engineer, Locomotive division, General Electric Company, Erie, Pa.

E. H. Davidson director, of the Interstate Commerce Commission's Bureau of Locomotive Inspection, was elected to the General Committee, with term expiring in 1951, in place of Mr. Bohannon. Three new members elected to the General Committee, with terms expiring in 1954, were O. J. Horger, chief engineer, Railway division, Timken Roller Bearing Company Canton, Ohio; T. F. Perkinson, manager, Transportation Engineering division, General Electric Company, Schenectady, N. Y. and C. K. Steins, mechanical engineer, Pennsylvania Philadelphia, Pa.

The next meeting of the New York Chapter of the **National Defense Transportation Association** will be held on December 13, in the Keystone room of the Hotel Statler at 7:45 p.m. Colonel E. C. R. Lasher, of the Joint Military Transportation Committee, Joint Chiefs of Staff, will be guest speaker. His subject will be "The Impact of Unification Upon Transportation."

A joint luncheon and meeting of the executive and railroad contact committees of the **Allegheny Regional Advisory Board** will be held in the Roosevelt Hotel, Pittsburgh, Pa., on December 15. C. R. Megee, vice-chairman, Car Service Division, Association of American Railroads, will speak on the national transportation situation.

The **Metropolitan Traffic Association of New York** will hold its annual ladies night meeting on January 12, 1950.

The **Traffic Club of Pittsburgh** will hold its annual dinner on January 26, 1950.

The Loading Research division of the **National Safe Transit Program** will hold a meeting on December 19, at 10 a.m., in the Palmer House, Chicago. The National Safe Transit Program is sponsored by the Porcelain Enamel Institute.

OVERSEAS

British Railways Ask 16⅔ Per Cent Increase in Freight Rates

Great Britain's nationalized transportation system has asked the House of Commons for authority to increase rates on railway and canal freight by 16 2/3 per cent, and to raise docking charges, in some cases by 75 per cent, according to a special dispatch from London to the New York Times.

As reported in the *Railway Age* of October 1, page 58, the British transportation system incurred in 1948 an operating deficit of just over £1.7 million, and an over-all loss in excess of £4.7 million ($13,160,000). Now, however, the system is said to be incurring operating losses at the rate of £20 million per year, with still larger deficits anticipated in 1950 unless revenues are materially increased.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

4,376 Freight Cars Delivered in November

Freight cars for domestic use delivered in November totaled 4,376, including 1,727 delivered by railroad shops, compared with October deliveries of 4,532 cars, which included 1,704 delivered by railroad shops, the American Railway Car Institute has announced. November deliveries included 1,017 box cars, 1,394 hopper cars, 1,155 gondola cars, 128 refrigerator cars, 144 tank cars and 538 cars of other types.

Freight cars ordered last month for domestic use numbered 1,145, of which 1,050 were ordered from railroad shops, compared with October orders for 201, all of which were ordered from contract builders. The backlog of freight cars on order on December 1 was 14,146, including 9,106 on order from railroad shops, compared with 17,377 cars on order on November 1 and 106,405 on order on December 1, 1948.

The **Lehigh & New England** is inquiring for 35 70-ton covered hopper cars.

LOCOMOTIVES

The **Canadian National** has ordered eight 1,500-hp. Diesel-electric road locomotive units from the Montreal Locomotive Works. The new locomotives, delivery of which is scheduled for next January and February, will be used in pairs on C.N.R. freight trains between Montreal, Que., and Chauvigny.

The **Missouri-Kansas-Texas** has ordered 17 Diesel-electric locomotive units. One 1,600-hp. switching unit will be built by Fairbanks, Morse & Co.; four 2,250-hp. passenger and nine 1,500-hp. switching units by the Electro-Motive Division of General Motors Corporation, and three 600-hp. switching units by the American Locomotive Company: Deliveries are expected to be completed during the first quarter of 1950.

The **Pennsylvania-Reading Seashore Lines** has ordered six 1,500-hp. Diesel-electric locomotive units from the Baldwin Locomotive Works for use in freight and passenger service on the Millville and Bridgeton branches.

The **Texas & Pacific** has ordered seven 1,500-hp. Diesel-electric switching locomotive units from the Electro-Motive Division of General Motors Corporation for delivery early next year.

SIGNALING

The **Chicago, Burlington & Quincy** has ordered from the Union Switch & Signal Co. material to install a remotely controlled interlocking at Illinois Junction, Ill. The 2½-ft. style C control machine will be installed in "Wood" tower. Other material includes code equipment, H-2 searchlight signals, M-22B electric switch machines and relays, rectifiers and transformers. Installation will be handled by railroad forces.

The American Locomotive Company has ordered four sets of intermittent inductive train control equipment from the General Railway Signal Company, to be applied to Diesel-electric road switchers being built for the **Southern**.

SUPPLY TRADE

The **Cooper-Bessemer Corporation**, Mt. Vernon, Ohio, has opened a district office in Halifax, N. S. **J. A. MacLeod** is branch manager, directing all sales and service activities on Diesel locomotives and marine and stationary applications of Diesel engines.

Robert E. Hunter, whose appointment as director of sales of the newly formed **General Motors Diesel, Ltd.** (part of **General Motors Corporation**), with headquarters at Montreal, Que., was reported in the *Railway Age* of November 12, is a native of New York State. Following graduation from the University of Michigan, he served in various sales capacities with Graham-Paige Motors Corporation. He was also associated with National Tube Company (a subsidiary of United States Steel Corporation) in industrial relations. Mr. Hunter first joined General Motors in 1937 as business management manager with the Pontiac Motor Division. He entered the Electro-Motive Division as assistant director of industrial relations, and subsequently served as manager of statistics and market analysis. He was a district sales manager for E.-M.D. at Chicago prior to his recent appointment.

Robert E. Hunter

Frederick W. Walker, Jr., whose appointment as district sales manager for the **Electro-Motive Division** of **General Motors Corporation** at Chicago, was reported in the *Railway Age* of November 12, is a native of Milwaukee, Wis., and a graduate of Lehigh University, where he received his B. S. degree in industrial engineering. Following graduation he obtained a summer position with the Great Northern, returning to Lehigh as an instructor in machine design during the 1936-37 academic year. In June, 1937, he joined Electro-Motive as an hourly apprentice. Mr. Walker was on military leave in the Army Air Forces from April, 1941, to December, 1945, rising to the rank of lieutenant

Frederick W. Walker, Jr.

colonel. Upon his return to Electro-Motive in 1945, he was appointed application engineer, becoming manager of statistics and market analysis in 1946. He was serving in the latter post at the time of his new appointment.

Milton A. Karp has been appointed chief engineer of the **Luria Engineering Corporation**, in charge of the engineering department, which is being moved to the company's plant in Bethlehem, Pa. Mr. Karp was formerly chief engineer for Ellis Wing Taylor.

William J. Niles, whose appointment as sales manager of the **Montreal Locomotive Works**, Montreal, Que., was announced in the *Railway Age* of December 3, joined the company in 1917. His experience in the company includes supervision of plant operating expenses,

William J. Niles

estimating and production, as well as miscellaneous sales promotion. As assistant to the manager, Mr. Niles was specifically engaged in expediting the company's munitions and other wartime production during World War II. He was appointed assistant secretary-treasurer in 1946, which position he held at the time of his recent appointment.

A. M. McLaren has been appointed branch manager for **Fairbanks, Morse & Co.** at Los Angeles, Cal., succeeding **J. A. Cuneo**, whose transfer to Chicago was reported in the *Railway Age* of December 3. **William H. Kingsley**, district manager of the New York office, Ideal Electric & Manufacturing Company, has joined Fairbanks, Morse as manager of the Electrical Division, with headquarters in the company's executive offices in Chicago.

The **Weir Kilby Corporation** has made the following appointments: **Ralph F. Gordon**, vice-president—sales; **M. J. Hassan**, vice-president—engineering; **J. G. Kreis**, vice-president—purchases; **E. H. Schubert**, vice-president—operations; and **Ralph G. Detmer**, assistant to president, sales and engineering.

OBITUARY

Carter Stanard Cole, assistant technical secretary of the American Society for Testing Materials, died on November 17, in Philadelphia, Pa. He was 53 years old.

John L. Hoffman, southeastern representative for the Oxweld Railroad Service Company, a unit of Union Carbide & Carbon Corp., died recently, after 27 years of service with the company. Mr. Hoffman's name was incorrectly reported in last week's issue of *Railway Age*.

ABANDONMENTS

Denver & Rio Grande Western.—Examiner Robert Romero has recommended in a proposed report that Division 4 of the I.C.C. deny this road's application to abandon its Reilly Canon branch, 8.9 mi. in Las Animas county, Colo.; and that the commission refuse to permit the D.&R.G.W. to abandon operation under trackage rights over 4.12 mi. of Colorado & Wyoming line, which is the connecting link between the Reilly Canon branch and the Atchison, Topeka & Santa Fe at Jansen, Colo. The recommendation was to the effect that the application be denied without prejudice to renewal within a year. Objections to abandonment were made by shippers, principally a coal mining company at Bon Carbo, Colo., at the end of the Reilly Canon branch, which is the principal source of traffic over the branch. The report noted that this mine now has resumed operations following a fire last February, and "appears to be in a position to produce substantial tonnage." The report also included an estimate by the D.&R.G.W. that $120,000 would be required to restore the branch to good condition, but added that the road's chief engineer "conceded that branch operations could be continued for another year with slight repairs." If the road were abandoned, the examiner said, the mine operator at Bon Carbo would be compelled to truck the coal at an additional transportation charge of 25 or 30 cents a ton. The examiner noted further that no losses have been incurred from operation of the branch for the past two years, and concluded that protestants should be afforded a one-year trial period "to demonstrate the support of the branch that may be expected from them."

Illinois Central.—This road has withdrawn the application it filed last year with the I.C.C. for authority to abandon a 24.7-mi. line between Silver City, Miss., and Holly Bluff (see *Railway Age* of October 2, 1948, page 69). The withdrawal was the basis of a recent commission order which dismissed the application "without prejudice."

Division 4 of the Interstate Commerce Commission has **authorized**:

Chicago & North Western.—To abandon, effective September 1, 1950, a 9.3-mi. branch line in Gogebic county, Mich., built to serve logging operations which are expected to terminate by that date.

Long Island.—To abandon 5.6 mi. of connecting branch line, unused since 1944, between Manorville, N. Y., and Eastport Junction.

Western Maryland.—To abandon approximately 0.4 mi. of its Kingsland branch in Allegany county, Md.

Application has been filed with the I.C.C. by:

Mississippi & Alabama.—To abandon operations over its entire line between Leakesville, Miss., and Vinegar Bend, Ala., approximately 17 mi. In its application the road noted that its single locomotive was in such disrepair as to render it useless, without extensive repairs.

CONSTRUCTION

Chicago, Burlington & Quincy.—This road will begin work next spring on a new passenger station at Ottumwa, Iowa, to be constructed of Indiana lannonstone and limestone. The building, 205 ft. by 38 ft., will contain a waiting room on the first floor and offices of the Ottumwa-Creston division on the second floor.

Pennsylvania-New York, Chicago & St. Louis (Wheeling & Lake Erie).—Division 4 of the I.C.C. has authorized these roads to construct 8.5 mi. of line in Harrison county, Ohio, to serve coal mining operations to be started by the Pittsburgh Consolidation Coal Company near Cadiz township. The Wheeling (N.Y.C. & St.L.) will construct a 2.2-mi. extension, and the Pennsylvania a 4-mi. extension, and the two roads jointly will construct 2.3 mi. to connect the two extensions. The territory to be served now lies between existing lines of the two roads and there is estimated to be sufficient coal to provide traffic for 35 to 50 years. Cost of construction to the Pennsylvania is estimated at $1,411,933, and to the Wheeling at $739,333, including what each will pay toward cost of the joint track.

Northern Pacific.—This road has begun work on a $301,000 main line change near Custer, Mont., which will eliminate the 1,069-ft. Big Horn tunnel and reduce track curvature sharply. Foley Brothers, Inc., St. Paul, Minn., has been awarded a contract for the excavation of approximately 350,000 cu. yd. of earth and rock, which is sched-

uled for completion in April, 1950. The 6,642-ft. line will be laid as soon thereafter as weather permits. The Big Horn tunnel has been in service since 1882.

FINANCIAL

Bangor & Aroostook.—*Bond Modification.*—This road has filed with the I.C.C. supplemental application with respect to its bond modification plan, proposing to place at 4½ per cent, rather than 4¼ per cent, the interest on consolidated refunding mortgage bonds it seeks to redesignate as first mortgage and extend from July 1, 1951, to July 1, 1976. (See *Railway Age*, September 10, page 80). In its application the road stated that "as a result of the reactions to the plan by bondholders, it seemed advisable, to insure prompt and successful consummation of the plan, to increase the interest rate . . ."

Cambria & Indiana.—*Acquisition by Bethlehem Steel Corporation.*—The Bethlehem Steel Corporation proposes to acquire 9,000 shares, or 60 per cent, of the outstanding capital stock of the C. & I., a 35.4-mi. road in Pennsylvania. Bethlehem holds 9,000 voting trust certificates of the road, and seeks I.C.C. permission to exchange these equally for shares of stock.

Canadian National.—*New Director.*—William James Parker, president of Manitoba Pool Elevators and vice-president of Canadian Cooperative Wheat Producers, Ltd., has been appointed to this road's board of directors.

Chicago, Burlington & Quincy.—*Trackage Rights.*—Supplementing a 1942 report granting trackage rights to the C.B.&Q. over 2.3 mi. of Colorado & Southern south-bound main line between Utah Junction, Colo., and Prospect, near Denver, Division 4 of the I.C.C. has now approved a C.B.&Q. application for acquisition of trackage rights on the C.&S. north-bound main line in the same area. C.B.&Q. north-bound trains had been using their own Buckwheat line between Utah Junction and Prospect since 1942, but construction of a new highway project involves removal of a portion of this line. As part of the agreement, a 693-ft. crossover track is to be built by the C.&S. between its north and south-bound main lines, with the cost to be paid by the C.B.&Q.

Chicago, Rock Island & Pacific.—*Acquisition.*—Division 4 of the Interstate Commerce Commission has conditionally authorized this road to acquire control through stock ownership of the Pullman, an industrial switching line in the Chicago area. Pullman's capital stock consists of 5,000 shares of common, par value $100 per share, and the Rock Island will purchase it all for $1,175,000 from the Pullman Finance & Properties Co., a subsidiary of Pullman, Inc. It will operate the road initially under a five-year lease, the ultimate plan being to integrate the property into the Rock Island system. Meanwhile, the Rock Island's subsidiary, Rock Island Improvement Company, will purchase from trustees of the Pullman Land Association, for $1,025,000, about 355 acres of industrial property located along Pullman's line.

The conditions imposed by the division are designed to maintain the "neutrality" of Pullman in such matters as interchange and switching arrangements with connecting lines. Also, the usual labor-protection provisions are imposed. The division's report follows generally the proposed report of Examiner Paul C. Albus, noted in the *Railway Age* of July 16, page 64. As reported there, the application was favored by the city of Chicago but opposed by the Illinois Central and the Belt of Chicago. The Rock Island, Division 4 said, "has sustained the burden of proof that its proposal. . . is consistent with the public interest."

"Affirmative action herein," the report continued, "does not necessarily mean that one or more of the interveners would be precluded from establishing consistency with the public interest if a similar application in their behalf were pending before us. The fact remains that the Rock Island, by virtue of its contract with Pullman, is the only carrier in a position to submit an application at this time."

Lackawanna & Wyoming Valley.—*Appointment of Trustee.*—Division 4 of the I.C.C. has ratified appointment by the U. S. District Court for the Middle District of Pennsylvania of E. McLain Watters as trustee of this road, of which he has been president since January 1, 1947. Conditions are that he receive no salary as president, but only what may be allowed by the court for his services as trustee, within such limits as the I.C.C. may approve as reasonable.

New York Central-New York, New Haven & Hartford.—*South Station Lease.*—A reorganization plan under which these two companies would agree to make a new lease for the South station, Boston, Mass., and by which claims of bondholders of the present Boston Terminal Company would be liquidated, has been agreed to by the two railroads and shortly will be presented to the I.C.C. for its approval. The plan, if approved by the commission and federal courts, would result in cash and other payments to present Terminal Company bondholders, formation of a new terminal company and the leasing of the station for the next 25 years by the New Haven and the New York Central. The railroads also would have an option to renew the lease for a second 25-year period at the same rental.

Pennsylvania.—*Bonds of Elmira & Williamsport.*—This road and its lessor, the Elmira & Williamsport, have filed with the I.C.C. a joint application for approval of a plan to extend the maturity date of $963,000 of the latter's first mortgage, 4 per cent bonds, and the P.R.R. guarantee of them, for 40 years from January 1, 1950. The application stated that the extension is specifically authorized by terms of the lease under which the P.R.R. has been operating the Elmira since 1863. The P.R.R. owns $47,000 and the general public $916,000 of the bonds involved. The application stated that the P.R.R. proposes to purchase the latter on or before their present maturity date, i.e., January 1, 1950.

Pennsylvania.—*Lease Modifications.*—This road has been authorized by Division 4 of the Interstate Commerce Commission to modify existing leases between it and 22 of its lessor roads to provide for current accounting on and after January 1, 1949, with respect to depreciation, amortization and retirements. (See *Railway Age* of July 30, page 66, and June 25, page 112). Purpose of this lease modification plan is to permit charges to income of items that will be allowable for income tax purposes, and the Pennsylvania stated that if the present modifications had been in effect in 1948, tax savings of approximately $2,000,000 would have resulted.

St. Louis-San Francisco.—*Merger of Lessors.*—This road has applied to the I.C.C. for authority to acquire the properties of four of its lessors—the Butler County, the Jonesboro, Lake City & Eastern, the Miami Mineral Belt, and the St. Louis, Kennett & Southeastern. The Frisco owns all stock of these lessors, except directors' qualifying shares; and all bonds of the two which have funded debt outstanding, i.e., $674,000 of first mortgage, 5 per cent bonds of the Jonesboro, and $150,000 of refunding and improvement, 6 per cent bonds of the Kennett. Its proposal contemplates cancellation of the lessors' stocks and bonds as it takes over their properties and assumes their liabilities. The application stated that the absorption plan will bring economies as a result of simplifying the inter-corporate structure of the Frisco system and eliminating the expense of maintaining the separate corporations.

Seaboard Air Line.—*Securities.*—Division 4 of the I.C.C. has extended until January 1, 1951, the period within which this road may sell securities pursuant to the plan of reorganization whereby it emerged from receivership. The securities would be sold to provide cash for settlements with holders of old Seaboard se-

curities who do not deposit their holdings for exchange under the reorganization plan. The present extension, like previous ones, came in response to a Seaboard petition which noted that depositing of old-company securities held in some foreign countries is still being delayed.

Southern.—*Acquisition of A. & Y.*—Division 4 of the I.C.C. has authorized this road to acquire all franchises, rights, and properties of its subsidiary, the Atlantic & Yadkin. The properties include a 130-mi. line between Greensboro, N. C., and Sanford, and a 19-mi. branch between Climax, N. C., and Ramseur. As a result of this acquisition the A.&Y. will be dissolved, and its assets distributed to the Southern as holder of all its stocks and bonds. Included in the latter are $1,500,000 first mortgage, 4 per cent bonds which became due April 1, 1949; the Southern, as guarantor, met the maturity. Benefits which the Southern expects to result from acquisition include improved service, operating economies of about $74,000 a year, and reductions in rates from substitution of single-line rates for joint-line rates on some commodities.

Western Maryland.—*Merger of Subsidiaries.*—This road has applied to the I.C.C. for approval of a merger plan wherein it proposes to acquire all property, franchises and other assets of seven wholly owned subsidiaries and to dissolve the subsidiaries, "in order that these properties may be subjected to the direct lien of the proposed General Mortgage of the Western Maryland,' now pending before the I.C.C. as F.D. 16795 (see *Railway Age* of December 3, page 69). The companies which the W. M. proposes to dissolve are the Greenbriar, Cheat & Elk; Somerset Coal; Fairmont Helen's Run; Fairmont Bingamon; Ghaffee; Cumberland; and Western Maryland Railroad Terminal Company. The latter two own no lines of railroad, but all the others are an integral part of the W. M. system. Not included in the plan are two other wholly owned subsidiaries, the Cumberland & Pennsylvania and the Chesapeake & Curtis. Of the roads in the proposed merger only the Greenbriar is encumbered, and the W. M. proposes to clear that indebtedness as part of the general mortgage plan. The merger also contemplates simplification of the W. M.'s corporate structure, elimination of many reports and a saving in state franchise taxes. No operating economies nor increased revenues are expected.

New Securities

Division 4 of the Interstate Commerce Commission has **authorized:**

New York, New Haven & Hartford.—To assume liability for $2,340,000 of equipment trust certificates to finance in part 25 streamlined sleeping cars costing an estimated total of $3,120,000. (See *Railway Age* of November 26, page 60). The certificates will be dated December 1, 1949, and mature in 15 annual installments of $156,000 each, beginning December 1, 1950. Selling price approved by the Commission is 98.6693, with 2¼ per cent interest rate, which will make the average annual cost approximately 2.46 per cent. The successful bid was made by Lehman Brothers and an associate. The certificates were reoffered to the public at prices yielding from 1.25 to 2.7 per cent, according to maturity.

St. Louis-San Francisco.—To assume liability for $4,080,000 of series E equipment trust certificates to finance in part 29 locomotives from Electro-Motive Division of General Motors Corporation, at a total estimated cost of $5,414,860. (See *Railway Age* of November 12, page 67). The certificates will be dated December 1, 1949, and mature in 15 annual installments of $272,000 each, beginning December 1, 1950. The commission's report approved a selling price of 99.5391 with 2¼ per cent interest rate — the bid of Halsey, Stuart & Co., and nine associates — which will make the average annual interest cost approximately 2.33 per cent. The certificates were reoffered to the public at prices yielding from 1.25 to 2.6 per cent, according to maturity.

Application has been filed with the I.C.C. by:

Chesapeake & Ohio.—To assume liability for $6,750,000 of equipment trust certificates to finance in part 10 Diesel-electric switching locomotives and 58 passenger-train cars, as follows:

	Description and builder	Estimated Unit Cost
10	1,200-hp. switching locomotives (Electro-Motive Division, General Motors Corporation)	$ 97,969
35	passenger coaches (Pullman-Standard Car Manufacturing Company)	121,100
2	passenger coaches (Pullman-Standard)	110,000
15	sleeping cars (Pullman-Standard)	146,250
3	sleeping cars (Pullman-Standard)	148,500
2	parlor cars (Pullman-Standard)	136,000
1	coach-baggage car (Pullman-Standard)	117,000

The application put the estimated total cost of the equipment at $8,466,440. The certificates would be dated January 1, 1950, would mature in 30 semi-annual installments of $225,000 each, beginning July 1, 1950, and would be sold on competitive bids.

Shown above, as they signed on November 30 the 99-year renewable lease of the Wheeling & Lake Erie by the Nickel Plate (New York, Chicago & St. Louis), are, left to right: L. L. White, president of the Nickel Plate and board chairman of the Wheeling; J. N. Dillen, secretary of the Nickel Plate; George Durham, president of the Wheeling; John T. Scott, Wheeling attorney, and E. M. Smith, vice-president and general counsel of the Nickel Plate

Average Prices Stocks & Bonds

	Nov. 29	Prev. week	Last year
Average price of 20 representative railway stocks..	40.11	38.44	44.07
Average price of 20 representative railway bonds..	87.53	86.49	87.98

Dividends Declared

Alabama Great Southern.—ordinary, $4.00; 6% participating preferred, $4.00; both payable December 23 to holders of record December 5.

Allegheny & Western. — guaranteed, $3.00, semiannual, payable January 3, 1950, to holders of record December 20.

Atchison, Topeka & Santa Fe. — common, $1.50, quarterly, payable March 1, 1950, to holders of record January 27, 1950.

Beech Creek.—50¢, quarterly, payable January 3, 1950, to holders of record December 9.

Chesapeake & Ohio.—3½% convertible preferred, 87½¢, quarterly, payable February 1, 1950, to holders of record January 6, 1950.

Chicago Great Western. — 5% preferred, 31¼¢, payable December 29 to holders of record December 15.

Chicago South Shore & South Bend.—quarterly, 25¢, payable December 15 to holders of record December 5.

Clearfield & Mahoning.—$1.50, semiannual, payable January 3, 1950, to holders of record December 20.

Nashville & Decatur. — 7½% guaranteed, 93¾¢, semiannual, payable January 2, 1950, to holders of record December 21.

New York & Harlem.—common, $2.50, semiannual; 10% preferred, $2.50, semiannual; both payable January 3, 1950, to holders of record December 14.

Pittsburgh, Fort Wayne & Chicago.—common, $1.75, quarterly, payable January 3, 1950, to holders of record December 10.

Pittsfield & North Adams.—$2.50, semiannual, payable January 3, 1950, to holders of record December 16.

United New Jersey R.R. & Canal Co. — $2.50, quarterly, payable January 10, 1950, to holders of record December 20.

Ware River. — $3.50, semiannual, payable January 4, 1950, to holders of record December 16.

RAILWAY OFFICERS

EXECUTIVE

William J. Wilkins, vice-president of the Cincinnati, New Orleans & Texas Pacific and executive general agent of the Southern System lines, with headquarters at Cincinnati, Ohio, has been elected vice-president of the Southern.

Kenneth A. Van Sickle, Emporia, Kan., who represents the principal stockholders of the Chicago, Aurora & Elgin, was elected chairman of the road's board of directors and executive vice-president on December 5, at the C. A. & E.'s first board meeting since expiration of the trusteeship on September 29. **Erling J. Hansen,** Barrington, Ill., was elected vice-president and a director. **A. L. Schwartz,** president, and **Philip Elfstrom,** vice-president and general manager, continue in their present positions.

FINANCIAL, LEGAL & ACCOUNTING

John C. Shields, general counsel of the Chesapeake & Ohio at Detroit, Mich., has retired from active service under the company's retirement plan, after 39 years of service with this road and its predecessors and affiliates. The position of general counsel at Detroit has been abolished. **William R. Althans,** a general attorney at Detroit, has been appointed assistant general counsel, in charge of the Detroit office of the law department. **Glenn C. Wilber,** also a general attorney at Detroit, has been transferred to Cleveland, Ohio.

W. K. Menard, whose retirement as secretary-treasurer and director of the Gulf, Colorado & Santa Fe at Galveston, Tex., was reported in the *Railway Age* of November 5, was born in that city on October 7, 1879. He began his railroad career with the G.C.&S.F. in February, 1899, as a junior clerk, and later served as clerk, assistant cashier, assistant paymaster, and paymaster. In July, 1933, he was appointed assistant secretary and treasurer. Mr. Menard was advanced to secretary and treasurer in February, 1946, and was subsequently made a director.

Colin S. MacKenzie, whose appointment as assistant general auditor of the Southern Pacific at San Francisco, Cal., was reported in the *Railway Age* of November 5, was born on January 10, 1901, at Oakland, Cal., where he graduated from high school in June, 1919. He entered S. P. service in July, 1923, as a clerk at San Francisco. In 1929 he was appointed special accountant at that point and in 1932 became tax accountant there. Mr. MacKenzie was advanced to head tax accountant at San Francisco in March, 1945, the post he held before his recent appointment.

Joseph T. Zoline, Winnetka, Ill., has been elected secretary and treasurer and a director of the Chicago, Aurora & Elgin.

R. M. Olson, assistant auditor of disbursements for the Minneapolis, St. Paul & Sault Ste. Marie at Minneapolis, Minn., has been promoted to assistant to comptroller at that point, succeeding **J. D. Bond,** transferred to the operating department. **C. A. Johnson** has succeeded Mr. Olson.

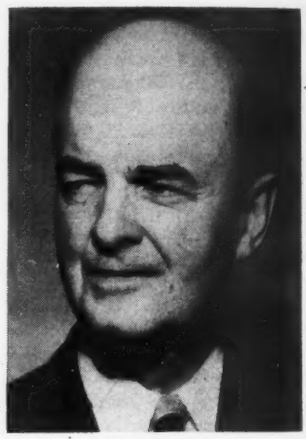
Arthur W. Lavidge, general auditor of the Chicago, Burlington & Quincy at Chicago, has been promoted to comptroller and head of the accounting department at that point. Mr. Lavidge was born at Omaha, Neb., on January 14, 1888. He entered the service of the Burlington in June, 1905, at Omaha, holding various clerical positions and acting as head of several departments until 1918. After serving in the United States Army, he returned to the Burlington in 1919 as chief clerk to comptroller, being appointed assistant auditor of expenditures in 1920. In 1924 he was advanced to auditor of expenditures, and in January, 1936, became auditor of freight accounts. Later the same year Mr. Lavidge was appointed assistant general auditor of the Burlington and its subsidiary, the Burlington Transportation Company. He was advanced to general auditor in November, 1946.

OPERATING

Michael Swislow, whose promotion to superintendent of the Chicago & Western Indiana, with headquarters at Chicago, was reported in the *Railway Age* of November 19, was born on April 13, 1898. He entered the service of the C. & W. I. as a switchman in June, 1920, and in 1925 was appointed yardmaster. He became trainmaster in 1938, and was furloughed to the Chicago South Side Railroad Terminal Committee as operating advisor from July, 1946, to January of this year. Mr. Swislow was subsequently promoted to assistant superintendent, the position he held at the time of his recent promotion.

J. D. Bond, assistant to comptroller of the Minneapolis, St. Paul & Sault Ste. Marie, has been promoted to assistant to general manager, with headquarters as before at Minneapolis, Minn.

Elmer J. Stubbs, whose appointment as general superintendent of transportation of the Erie at Cleveland, Ohio, was reported in the *Railway Age* of December 3, was born at Lewisburg, Ohio, and attended Ohio State and Ohio Wesleyan Universities before joining the Erie in 1913. He held various positions at New York, Oil City, Pa., Sharon and Meadville, until he was named freight agent at Akron, Ohio, in 1920. He was transferred to New York in 1928 and worked as assistant superintendent of terminals from 1929 to 1933, then becoming chief clerk to the superintendent of transportation. In 1936 Mr. Stubbs was appointed superintendent of transportation, which position he held until his recent promotion.



Elmer J. Stubbs

H. V. Bordwell, assistant general manager of the Western district of the Erie at Youngstown, Ohio, has been granted leave of absence following his appointment as a member of the National Railroad Adjustment Board.

G. H. Linney, assistant to the general manager of the Northern Alberta (owned jointly by the Canadian Pacific and the Canadian National) at Edmonton, Alta., has retired from service. He is succeeded by **K. R. Perry,** assistant superintendent, Medicine Hat division, of the C. P. at Bassano, Alta. Mr. Perry has been succeeded by **R. F. P. Bowman,** division engineer on the C. P. at Brandon, Man.

In connection with the lease of the Wheeling & Lake Erie to the New York, Chicago & St. Louis (Nickel Plate), **F. M. Shelton,** superintendent of the W. & L. E., at Toledo, Ohio, has been ap-

pointed special representative—operating department, Nickel Plate system, at Toledo; **L. A. Soult,** executive assistant of the W. & L. E., has been appointed executive assistant—operating department, of the Nickel Plate system, with headquarters as before at Brewster, Ohio; **W. W. Weiss,** superintendent of car service of the W. & L. E., has been appointed assistant superintendent of transportation of the Nickel Plate system at Brewster; **C. E. Miller,** inspector of stations and terminals of the W. & L. E., has been appointed assistant superintendent of stations of the Nickel Plate system, at Brewster; and **J. W. Hauger,** superintendent transportation of the W. & L. E., has been appointed district superintendent of the new W. & L. E. district of the Nickel Plate, with headquarters as before at Brewster.

The jurisdiction of the following Nickel Plate personnel has been extended to include the W. & L. E. district: **S. W. Miller,** superintendent of communications at Cleveland, Ohio; **M. B. Phipps,** general superintendent, and **G. R. Bowman,** assistant general superintendent, at Bellevue, Ohio; **D. M. Bender,** superintendent of transportation, and **R. S. Lewis,** assistant superintendent of transportation, at Cleveland; **A. P. Wunderlich,** superintendent of car service, at Cleveland; and **J. T. Osborne,** superintendent of stations at Cleveland.

The Erie has announced the following changes in its operating department: **Stanley F. McGranahan,** division superintendent at Jersey City, N. J., promoted to assistant general manager, Eastern district, at Jersey City; **J. Philip Allison,** division superintendent at Salamanca, N. Y., appointed assistant general manager, Western district, at Youngstown, Ohio; **Harry A. Bookstaver,** division superintendent at Huntington, Ind., appointed superintendent, New York division, at Jersey City; **Thomas J. Sanok,** assistant division superintendent at Jersey City, promoted to superintendent, Meadville, Bradford and Buffalo-Southwestern divisions, at Salamanca; **Francis J. Mulligan,** assistant division superintendent at Chicago, promoted to superintendent, Marion division, at Huntington; **Thomas E. McGinnis,** assistant superintendent transportation at Cleveland, Ohio, appointed assistant superintendent, New York division at Jersey City; **Edwin J. Robisch,** trainmaster at Marion, Ohio, appointed assistant superintendent at Chicago; **Arthur H. Specker,** trainmaster at Huntington, transferred to the Kent division at Marion, and **James M. Moonshower,** chief train dispatcher at Huntington, appointed trainmaster, Marion division, at Huntington.

Mr. McGranahan was born at Jamestown, Pa., on August 19, 1892, and entered railroad service with the Erie in 1910 as a clerk at Greenville, Pa. Advancing through various positions, he became inspector of operation at Cleveland, Ohio, in 1937 and later that year was named chief clerk to the superintendent of transportation. In 1939 Mr. McGranahan was appointed assistant superintendent of transportation, becoming

Stanley F. McGranahan

superintendent of the Buffalo-Rochester division in 1946. He transferred to the New York division last year.

Mr. Allison was born at Baltimore, Md., on July 3, 1905, and entered railroad service with the Erie in 1929 in the engineering corps at Buffalo, N. Y. He was appointed general foreman at

J. Philip Allison

Hornell, N. Y., in 1937; track supervisor at Croxton, N. J., in 1940; inspector of operation at Cleveland later in 1940; trainmaster at Hornell in 1941; and assistant superintendent of the Marion division at Chicago in 1944. Mr. Allison advanced to superintendent of that division in 1945 and two years later was transferred to the Allegany, Bradford, Meadville and Buffalo-Southwestern divisions at Salamanca.

G. D. Richey, assistant trainmaster of the International-Great Northern (part of the Missouri Pacific Lines) at Valley Junction, Tex., has been promoted to trainmaster of the Gulf Coast Lines (also part of the M.P.) at Harlingen, Tex. Appointed to succeed Mr. Richey is **J. N. Cunningham.**

TRAFFIC

J. A. Ormondy, whose retirement as general passenger agent, Northern district, Southern Pacific, at Portland, Ore., was reported in the *Railway Age* of November 19 began his railroad career in Oregon in 1898 as a telegrapher for the Oregon Railway & Navigation Co. In succeeding years he held telegraphic and clerical positions with various roads in the Pacific Northwest and at St. Paul, Minn., and joined the S. P. as a clerk at Portland, Ore., in 1908. In 1911 he was made chief clerk in the general passenger department, becoming assistant general passenger agent nine years later. He was advanced to general passenger agent in 1923, which post he held until his appointment as assistant passenger traffic manager in 1928. The following year Mr. Ormondy became passenger traffic manager, Northern district, and in 1932 he was appointed general passenger agent at Portland.

James H. Pruett, Jr., whose appointment as general passenger agent, Northern district, Southern Pacific, with headquarters at Portland, Ore., was reported in the *Railway Age* of November 19, entered S. P. service at El Paso, Tex., in 1927 as a clerk in the division superintendent's office. He served as ticket clerk at San Antonio, Tex., and Houston, city passenger agent at St. Louis, Mo., and district passenger agent at Boston, Mass. In 1943 he was appointed district passenger agent to assist in handling military traffic on the Monterey peninsula in California, being transferred in the same position the following year to Palo Alto, Cal. Since July, 1947, Mr. Pruett has been special assistant to vice-president in charge of system passenger traffic.

R. K. Mossman, division passenger agent of the Northern Pacific at Seattle, Wash., has been promoted to assistant general passenger agent at St. Paul, Minn., succeeding **M. E. Harlan,** whose retirement was reported in the *Railway Age* of December 3. **J. A. Beatty,** district passenger agent at Seattle, has been appointed assistant general passenger agent at that point.

S. H. Denney, general agent at New York of the Wheeling & Lake Erie and the Lorain & West Virginia, has retired from active duty at his own request, and on advice of medical authorities, after 36 years of service.

E. W. Thomas, freight claim agent, Coast Lines, Atchison, Topeka & Santa Fe, at Los Angeles, Cal., has been promoted to assistant general freight claim agent with headquarters at Topeka, Kan. He is succeeded by **Howard W. Gentle,** assistant freight claim agent, Coast

Lines, at Los Angeles. **John E. Chappell,** assistant freight claim agent, Coast Lines, at San Francisco, Cal., has been transferred to Los Angeles to succeed Mr. Gentle, and has been replaced in turn by **Harold Howarth.**

P. V. Demerest has been appointed general agent of the Missouri-Kansas-Texas at Cincinnati, Ohio, succeeding the late **E. H. Henken,** whose death was reported in the *Railway Age* of November 26. **C. E. Smith** has been appointed to the newly created position of assistant general freight agent at St. Louis, Mo.

L. N. Helm has been appointed district freight agent of the Norfolk & Western at Cincinnati, Ohio. **T. L. Davis,** commercial agent at Chattanooga, Tenn., has been appointed general agent, with the same headquarters.

James B. Warren, assistant general passenger agent of the Western Pacific, at Chicago, has been appointed Eastern perishable freight agent at that point.

Marvin W. Carlson, traveling freight agent of the Chicago, Rock Island & Pacific, at Davenport, Iowa, has been promoted to general agent in the road's Indianapolis (Ind.) office, succeeding the late **J. E. McColloch.**

H. G. Van Winkle, assistant general passenger agent of the Chicago & North Western, at Chicago, has retired after 43 years of service with that road.

W. S. Gregory, assistant manager of the mail, baggage and express department, Chicago & North Western, at Chicago, has retired after 49 years of service. He is succeeded by **E. W. Behringer.**

PURCHASES and STORES

The jurisdiction of **M. B. Bowman,** general storekeeper of the New York, Chicago & St. Louis at Lima, Ohio, has been extended to include that company's new Wheeling & Lake Erie district.

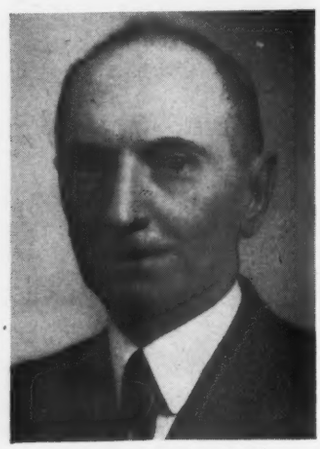
MECHANICAL

In connection with the lease of the Wheeling & Lake Erie to the New York, Chicago & St. Louis (Nickel Plate), **E. A. Hamilton,** signal and electrical engineer of the W. & L. E., has been appointed superintendent of electrical equipment of the Nickel Plate system at Brewster, Ohio, and **J. W. Cameron,** engineer of tests of the W. & L. E., has been appointed to the same position on the Nickel Plate at Brewster. **J. O. Hill,** superintendent motive power and cars, and **R. J. Snyder,** assistant superintendent motive power and cars, of the W. & L. E., have been appointed district superintendent of motive power and assistant district superintendent of motive power, respectively, of the new W. & L. E. district of the Nickel Plate, with headquarters as before at Brewster. The jurisdictions of **R. Schey,** general superintendent car department, and **D. J. Coon,** mechanical engineer, of the Nickel Plate, have been extended to include the W. & L. E. district.

J. E. Kerwin, superintendent of the Chicago, Rock Island & Pacific's Silvis (Ill.) shops, has been appointed master mechanic of the Missouri-Kansas division, with headquarters at Kansas City, Kan., succeeding **K. O. Thomas,** granted a leave of absence because of illness. Appointed acting superintendent of the Silvis shops is **R. W. Harter,** assistant superintendent of shops.

ENGINEERING & SIGNALING

Albert A. Miller, whose retirement as chief engineer, maintenance of way, Missouri Pacific Lines, at St. Louis, Mo., was reported in the *Railway Age* of November 5, was born at Zanesville, Ohio, on September 28, 1879. Mr. Miller began his railroad career in 1900, while still attending engineering school at Ohio State University, from which he received his B. S. degree in civil engineering in 1902. After serving successively with the Baltimore & Ohio as rodman, transitman, assistant division engineer and division engineer, he became in 1907, chief engineer of a mining operation in Mexico. Two years later he joined the M.P. as assistant engineer in the maintenance of way department and held the positions consecutively of division engineer at Kansas City, Mo.; general roadmaster at Poplar Bluff, Mo.; engineer, maintenance of way, at Little Rock, Ark.; district engineer at Kansas City; division superintendent at Poplar Bluff and Wynne, Ark., and engineer, maintenance of way, at St. Louis. In 1938 Mr. Miller was advanced to chief engineer, maintenance of way, at St. Louis.



Albert A. Miller

W. A. Smith, division engineer on the Canadian Pacific at Edmonton, Alta., has been transferred in that position to Brandon, Man., succeeding **R. F. P. Bowman,** whose appointment as assistant superintendent at Bassano, Alta., is reported elsewhere in this issue. **D. H. Dunphy,** roadmaster at Wilkie, Sask., succeeds Mr. Smith.

In connection with the lease of the Wheeling & Lake Erie to the New York, Chicago & St. Louis, **W. L. Peoples,** engineer maintenance of way and structures, and **F. A. Poling,** assistant engineer maintenance of way and structures, of the W. & L. E., have been appointed district engineer and assistant district engineer, respectively, of the W. & L. E. district of the N. Y. C. & St. L., with headquarters as before at Brewster, Ohio. The jurisdictions of **S. G. Raber,** signal engineer, and **R. T. Blewitt,** bridge engineer, of the N. Y. C. & St. L., both with headquarters at Cleveland, Ohio, have been extended to include the W. & L. E. district.

SPECIAL

A. E. Bourdon, engineer, Freight Loading & Container section, Association of American Railroads, Chicago, has been transferred to New York.

In connection with the lease of the Wheeling & Lake Erie to the New York, Chicago & St. Louis (Nickel Plate) **A. J. Duncan,** assistant to president of the W. & L. E., has been appointed assistant director of personnel of the Nickel Plate system, with headquarters as before at Cleveland, Ohio, and **Stewart D. Coulton,** supervisor of safety of the W. & L. E., has been appointed assistant superintendent of safety of the Nickel Plate system at Cleveland. The jurisdictions of **P. L. Peffer,** director of personnel, **R. C. Sabens,** superintendent of safety, and **P. W. Adams,** superintendent of property protection, of the Nickel Plate, have been extended to include that road's W. & L. E. district.

George G. Green, claim agent of the Railway Express Agency's Western departments at San Francisco, Cal., has been appointed chief claim agent at that point.

Cecil G. Muldoon, of the Detroit News, has been appointed public relations representative of the New York Central at Cleveland, Ohio, succeeding **Harry B. Spurrier,** who has been transferred to Chicago.

OBITUARY

J. E. McColloch, general agent of the Chicago, Rock Island & Pacific at Indianapolis, Ind., died of pneumonia in that city on November 14.

Barret Conway, who retired on November 30 as vice-president and secretary of the Chicago & North Western System, died at the Evanston, Ill., hospital on December 7.

Table of Freight Operating Statistics appears on next left-hand page.

"Outpulls ANY OTHER LOCOMOTIVE IN ITS CLASS..." *say those who have compared it!*

Those who have had a chance to compare the Lima-Hamilton 1000-hp switcher with others have been unanimous on several points in their comments to us. They have all stated that it outpulls any other switcher in its horsepower class. It handles more smoothly, from starting to full load. It has less vibration at all speeds.

Arrange to have your people take a careful look at this locomotive. It is powered by our own Hamilton-built engine. It uses standard Westinghouse rotating equipment. It uses standard accessories of the highest grade.

LIMA HAMILTON CORPORATION

LIMA LOCOMOTIVE WORKS

Division of the Lima-Hamilton Corporation

LIMA, OHIO

Freight Operating Statistics of Large Steam Railways — Selected

Region, road and year		Miles of road operated	Locomotive-miles: Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (thousands)	Car-miles: Per cent loaded	Ton-miles (thousands): Gross excl.locos. & tenders	Ton-miles (thousands): Net rev. and non-rev.	Road-locos. on lines: Serviceable: Unstored	Road-locos. on lines: Serviceable: Stored	Road-locos. on lines: B.O.	Road-locos. on lines: Per cent B.O.
New Eng. Region	Boston & Maine	1949	1,701	246,195	253,689	12,483	9,628	69.8	587.420	243,508	82	9	24	20.9
		1948	1,746	295,112	304,963	15,537	10,730	72.0	663,023	295,951	93	2	21	18.1
	N. Y., N. H. & Htfd	1949	1,774	252,926	253,711	17,581	10,602	69.4	630,502	277,146	100	19	8	6.3
		1948	1,778	319,224	322,313	23,875	12,644	71.4	763,896	347,169	123	16	30	17.8
Great Lakes Region	Delaware & Hudson	1949	794	210,442	253,644	28,532	9,064	68.7	610,381	309,038	125	52	18	9.8
		1948	794	277,020	334,997	34,958	11,864	69.4	854,900	468,627	123	28	33	17.9
	Del., Lack. & Western	1949	966	244,328	270,859	28,923	11,394	68.9	730,920	321,086	91	33	28	18.4
		1948	971	293,859	325,515	35,606	13,001	72.5	850,233	408,990	109	25	16	10.7
	Erie	1949	2,231	577,564	595,531	39,384	32,029	67.9	1,972,471	776,063	164	51	55	20.4
		1948	2,229	670,448	707,619	56,958	36,741	68.4	2,362,766	1,003,143	239	53	74	20.2
	Grand Trunk Western	1949	971	230,658	238,735	1,759	7,723	65.9	502,776	208,774	52	..	7	11.9
		1948	972	270,941	278,069	2,605	8,911	66.9	591,396	269,462	66	3	9	11.5
	Lehigh Valley	1949	1,239	222,133	235,354	24,693	11,069	67.1	749,917	347,681	56	16	18	20.0
		1948	1,239	299,371	334,484	37,403	12,935	73.1	862,758	442,086	89	3	21	18.6
	New York Central	1949	10,680	2,684,791	2,811,323	141,847	97,185	62.6	6,468,749	2,799,474	899	222	368	24.7
		1948	10,692	3,256,720	3,471,606	237,537	116,689	64.8	8,115,326	3,867,795	1,092	91	312	20.9
	New York, Chic. & St. L.	1949	1,656	499,294	509,428	7,307	21,417	67.1	1,372,249	566,970	118	43	25	13.4
		1948	1,656	581,505	588,190	7,546	24,210	72.4	1,514,932	691,233	139	16	18	10.4
	Pitts. & Lake Erie	1949	221	58,575	59,288	36	2,202	65.9	187,389	111,374	18	9	22	44.9
		1948	223	89,913	91,537	523	4,098	70.0	337,113	204,114	37	3	12	23.1
	Wabash	1949	2,381	589,109	596,720	9,859	22,226	69.3	1,371,903	560,523	147	13	52	24.5
		1948	2,381	649,689	664,402	15,744	23,001	72.2	1,450,378	642,466	156	9	38	18.7
Central Eastern Region	Baltimore & Ohio	1949	6,086	1,471,037	1,768,370	189,818	54,913	63.2	3,989,386	1,876,981	707	112	260	24.1
		1948	6,076	1,886,236	2,365,266	261,454	69,128	66.0	5,065,126	2,584,949	860	33	188	17.4
	Central of New Jersey*	1949	415	59,326	59,400	4,415	2,454	67.6	167,918	85,001	21	8	7	19.4
		1948	417	77,117	78,964	6,898	3,175	67.1	235,748	125,102	44	..	20	31.3
	Central of Pennsylvania	1949	212	54,953	58,771	7,364	2,418	67.9	161,341	80,819	21	9	15	33.3
		1948	213	81,247	89,766	14,551	3,089	70.4	227,468	126,755	39	4	12	21.8
	Chicago & Eastern Ill	1949	909	114,577	114,740	2,599	4,195	69.5	264,073	122,093	35	8	2	4.4
		1948	909	154,177	154,811	4,500	5,346	69.2	359,408	174,580	48	4	18	25.7
	Elgin, Joliet & Eastern	1949	238	84,664	85,140	.....	3,007	63.9	229,980	120,062	29	4	1	2.9
		1948	238	96,051	96,683	.....	3,474	69.1	265,998	147,512	35	8	1	2.3
	Pennsylvania System	1949	10,039	2,574,309	2,795,549	342,532	109,607	65.8	7,564,198	3,556,642	1,244	167	428	23.3
		1948	10,023	3,623,967	4,058,647	502,327	148,483	66.2	10,590,757	5,340,311	1,774	41	247	12.0
	Reading	1949	1,323	318,134	332,101	28,831	11,205	62.7	863,465	445,756	142	48	50	20.8
		1948	1,337	434,680	461,681	47,642	16,543	67.5	1,289,585	723,470	192	25	37	14.6
	Western Maryland	1949	836	132,773	154,605	17,983	4,637	65.2	362,059	197,114	114	54	11	6.1
		1948	837	209,470	259,813	39,484	7,641	61.5	636,201	351,627	156	5	15	8.5
Pocahontas Region	Chesapeake & Ohio	1949	5,041	1,029,039	1,083,100	38,582	40,279	59.1	3,153,991	1,638,380	466	121	132	18.4
		1948	5,003	1,642,637	1,759,444	74,120	70,736	58.8	5,952,329	3,397,652	607	5	92	13.1
	Norfolk & Western	1949	2,107	504,825	530,024	34,224	21,589	60.3	1,718,351	880,093	210	86	44	12.9
		1948	2,107	829,376	883,571	60,318	38,143	58.7	3,345,481	1,850,918	275	24	21	6.6
Southern Region	Atlantic Coast Line	1949	5,507	683,101	691,034	12,195	18,407	61.9	1,268,224	564,244	337	40	78	17.1
		1948	5,549	838,430	856,912	13,933	20,993	66.7	1,403,605	657,786	337	17	78	18.1
	Central of Georgia	1949	1,783	258,037	261,159	4,615	6,993	70.2	449,251	208,948	99	4	11	9.6
		1948	1,783	287,570	291,233	4,880	7,308	71.9	475,551	230,981	101	3	10	8.8
	Gulf, Mobile & Ohio	1949	2,854	311,143	311,143	290	15,000	71.8	959,780	445,124	68	26	4	4.1
		1948	2,847	340,620	343,803	605	16,074	74.4	1,017,748	495,726	112	17	17	11.6
	Illinois Central	1949	6,542	1,339,829	1,342,848	45,215	49,767	65.6	3,360,253	1,569,291	539	31	82	12.6
		1948	6,550	1,441,927	1,445,594	49,809	53,117	65.5	3,668,414	1,756,814	561	20	80	12.1
	Louisville & Nashville	1949	4,774	1,024,597	1,089,170	25,486	27,880	65.9	1,896,281	947,959	314	81	69	14.9
		1948	4,750	1,421,550	1,538,466	40,909	37,639	63.0	2,758,596	1,437,012	411	19	70	14.0
	Nash., Chatt. & St. Louis	1949	1,049	185,775	187,013	2,904	5,594	73.7	345,951	159,657	60	..	1	1.6
		1948	1,051	265,564	273,117	7,388	6,443	77.3	407,492	201,150	84	..	6	6.7
	Seaboard Air Line	1949	4,139	631,592	645,466	3,864	19,174	64.2	1,324,505	601,578	230	33	58	18.1
		1948	4,142	679,090	705,049	10,338	20,747	68.0	1,388,940	656,542	259	30	46	13.7
	Southern	1949	6,179	1,114,580	1,122,177	11,896	36,746	69.1	2,270,203	986,278	419	97	202	28.1
		1948	6,449	1,580,352	1,606,334	30,125	42,371	70.8	2,691,411	1,240,939	582	24	147	19.5
Northwestern Region	Chicago & North Western	1949	8,073	950,654	982,953	25,601	31,728	65.4	2,185,329	967,704	331	15	118	25.4
		1948	8,055	1,073,331	1,131,638	27,609	35,532	65.6	2,448,805	1,101,492	375	..	103	21.5
	Chicago Great Western	1949	1,445	170,291	170,885	4,979	8,773	67.9	558,357	236,262	43	3	1	2.1
		1948	1,445	222,200	225,024	10,902	9,529	69.2	616,590	273,200	56	1	11	16.2
	Chic., Milw., St. P. & Pac.	1949	10,663	1,344,299	1,403,504	55,857	48,048	65.7	3,169,066	1,381,527	447	58	77	13.2
		1948	10,663	1,578,001	1,665,302	76,710	53,575	64.1	3,749,211	1,731,158	478	19	83	14.3
	Chic., St. P., Minn. & Omaha	1949	1,606	201,181	211,622	11,708	5,612	67.6	381,575	168,011	76	..	29	27.6
		1948	1,606	229,025	245,364	13,589	6,152	70.9	415,364	195,969	88	1	25	21.9
	Duluth, Missabe & Iron Range	1949	574	145,464	146,056	1,348	7,415	50.7	750,942	453,667	43	..	5	10.4
		1948	578	169,810	170,697	1,212	8,860	51.8	846,183	513,907	48	..	1	2.0
	Great Northern	1949	8,222	1,210,815	1,212,692	54,623	47,566	59.5	3,662,311	1,728,221	379	42	62	12.8
		1948	8,237	1,253,032	1,256,768	52,453	50,857	62.9	3,859,990	1,932,426	394	26	53	11.2
	Minneap., St.P. & S. Ste. M.	1949	4,179	409,241	414,366	3,430	14,040	66.5	946,253	451,036	116	..	10	7.9
		1948	4,180	501,071	512,910	8,875	16,952	65.4	1,173,777	564,705	128	..	11	7.9
	Northern Pacific	1949	6,592	934,450	991,179	56,408	36,466	66.1	2,563,463	1,161,411	316	13	73	18.2
		1948	6,593	988,890	1,047,067	59,422	39,545	65.0	2,805,312	1,311,123	360	7	52	12.4
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1949	13,102	2,335,736	2,450,398	97,302	95,790	69.2	6,095,736	2,369,534	632	151	111	12.4
		1948	13,080	2,692,196	2,853,648	131,571	104,465	70.0	6,807,687	2,836,537	710	81	149	15.9
	Chic., Burl. & Quincy	1949	8,839	1,234,370	1,270,113	45,372	51,837	66.7	3,336,074	1,433,744	406	34	123	21.8
		1948	8,670	1,355,352	1,392,807	48,996	56,114	65.0	3,826,074	1,732,585	419	26	82	15.6
	Chic., Rock I. & Pac.	1949	7,589	1,038,684	1,070,502	13,178	37,434	67.1	2,420,009	1,074,340	244	30	109	28.5
		1948	7,613	1,126,120	1,165,615	11,827	36,869	68.8	2,410,578	1,115,402	295	32	53	13.9
	Denver & R. G. Wn.	1949	2,413	379,854	409,859	51,193	13,672	70.6	903,267	411,494	123	27	40	21.1
		1948	2,443	475,360	535,187	79,725	16,343	74.5	1,064,103	504,649	179	8	34	15.4
	Southern Pacific	1949	8,067	1,979,219	2,152,914	331,102	84,613	65.4	5,699,450	2,261,418	736	25	168	18.1
		1948	8,093	2,186,402	2,443,370	450,934	93,853	69.0	6,228,938	2,626,374	766	2	161	17.3
	Union Pacific	1949	9,721	2,454,444	2,543,826	178,448	102,508	64.0	6,943,973	2,784,649	589	60	157	19.5
		1948	9,751	2,725,692	2,825,218	200,165	114,481	66.3	7,404,781	3,030,786	639	33	123	15.5
	Western Pacific	1949	1,192	230,840	253,681	25,887	10,806	78.1	646,573	291,846	68	9	47	37.9
		1948	1,192	256,398	281,718	25,469	11,802	80.5	689,799	324,773	80	28	15	12.2
Southwestern Region	International-Gt. Northern*	1949	1,110	153,954	154,105	302	5,202	68.0	365,032	174,634	62	17	4	4.8
		1948	1,110	193,722	195,050	1,422	5,924	67.8	417,642	195,176	68	..	14	17.1
	Kansas City Southern	1949	886	189,569	193,827	1,694	9,276	67.9	616,380	275,655	46	..	6	11.5
		1948	885	186,091	187,063	1,564	9,301	68.0	628,644	297,835	45	5	6	10.7
	Mo.-Kans.-Texas Lines	1949	3,241	449,805	461,619	8,981	16,265	67.4	1,025,648	446,696	102	2	45	30.2
		1948	3,241	610,652	626,628	7,646	18,528	61.7	1,264,174	552,123	125	2	24	15.9
	Missouri Pacific†	1949	....	.....	.....	.....	.....	..	.....	.....	..	..	..	..
		1948	....	.....	.....	.....	.....	..	.....	.....	..	..	..	..
	Texas & Pacific	1949	1,852	278,320	278,320	10,917	10,155	65.7	675,068	275,530	108	10	2	1.7
		1948	1,852	454,447	454,447	14,260	15,599	64.8	1,067,483	461,404	101	5	15	12.4
	St. Louis-San Francisco	1949	4,614	742,412	752,947	8,393	25,540	67.3	1,691,160	764,112	234	49	45	13.7
		1948	4,615	759,411	775,879	8,412	22,631	67.4	1,530,275	693,806	290	19	40	11.5
	St. Louis Southw. Lines	1949	1,562	364,488	367,757	5,075	15,366	73.0	897,728	401,297	86	6	16	14.8
		1948	1,562	349,007	349,645	4,747	14,427	74.4	880,126	393,429	81	13	14	13.0
	Texas & New Orleans	1949	4,314	798,970	798,997	24,952	25,509	68.8	1,670,069	739,404	205	2	55	21.0
		1948	4,314	933 853	933,907	17,859	26,649	70.8	1,753,539	805,259	218	..	35	13.8

Items for the Month of September 1949 Compared with September 1948

Region	Region, road and year	Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos. and tenders	G.t.m.per train-mi. excl.locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd. car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Mi. per loco. per day
New Eng. Region	Boston & Maine 1949	2,947	8,363	11,310	3.2	36,283	2,390	991	25.3	728	41.2	4,772	15.2	84.1
	1948	1,622	9,907	11,529	2.8	34,977	2,251	1,005	27.6	842	42.4	5,650	15.6	99.2
	N. Y., N. H. & Htfd 1949	2,487	14,715	17,202	2.7	34,523	2,499	1,098	26.1	551	30.3	5,208	13.8	81.7
	1948	1,426	20,460	21,886	1.5	33,148	2,397	1,089	27.5	527	26.9	6,509	13.9	68.2
Great Lakes Region	Delaware & Hudson 1949	6,790	4,177	10,967	4.1	51,921	2,915	1,476	34.1	945	40.3	12,974	17.9	51.0
	1948	2,754	7,028	9,782	4.5	55,643	3,101	1,700	39.5	1,516	55.3	19,674	18.0	71.6
	Del., Lack. & Western 1949	7,480	7,132	14,612	8.4	43,536	3,048	1,339	28.2	692	35.6	11,080	14.6	73.5
	1948	4,460	11,054	15,514	4.8	42,550	2,943	1,416	31.5	856	37.5	14,055	14.7	91.5
	Erie 1949	12,282	16,139	28,421	8.3	56,834	3,438	1,353	24.2	883	53.6	11,595	16.6	85.3
	1948	7,293	25,233	32,526	4.3	56,890	3,550	1,507	27.3	1,031	55.3	15,001	16.1	77.1
	Grand Trunk Western 1949	5,013	7,318	12,331	12.1	45,128	2,195	911	27.0	551	30.9	7,167	20.7	138.1
	1948	4,507	8,727	13,234	8.2	43,061	2,197	1,001	30.2	660	32.6	9,241	19.7	131.2
	Lehigh Valley 1949	10,399	8,816	19,215	13.0	61,686	3,439	1,594	31.4	616	29.2	9,354	18.3	102.7
	1948	6,923	12,475	19,398	13.0	53,889	2,949	1,511	34.2	745	29.8	11,894	18.7	111.5
	New York Central 1949	73,236	75,586	148,822	9.4	41,948	2,446	1,059	28.8	614	34.0	8,737	17.4	74.5
	1948	52,433	106,962	159,395	3.4	38,836	2,529	1,206	33.1	806	37.5	12,058	15.6	93.0
	New York, Chic. & St. L. 1949	4,678	11,084	15,762	3.8	59,580	2,764	1,142	26.5	1,212	68.3	11,412	21.7	99.2
	1948	2,214	13,046	15,260	1.9	50,951	2,621	1,196	28.6	1,502	72.7	13,914	19.6	123.6
	Pitts. & Lake Erie 1949	6,298	7,836	14,134	11.4	46,545	3,200	1,902	5.06	259	7.8	16,798	14.5	44.4
	1948	4,691	10,424	15,115	6.5	56,092	3,759	2,276	49.8	459	13.2	30,510	15.0	64.4
	Wabash 1949	7,443	14,606	22,049	3.1	47,467	2,360	964	25.2	909	52.0	7,847	20.4	100.7
	1948	5,814	15,405	21,219	3.2	44,650	2,256	999	27.9	1,041	51.6	8,994	20.0	117.5
Central Eastern Region	Baltimore & Ohio 1949	59,509	32,801	92,310	12.8	38,225	2,761	1,299	34.2	679	31.4	10,280	14.1	62.7
	1948	45,646	46,684	92,330	6.9	34,473	2,739	1,398	37.4	930	37.7	14,181	12.8	82.2
	Central of New Jersey* 1949	1,464	8,382	9,846	7.8	38,834	2,914	1,475	34.6	284	12.1	6,827	13.7	93.2
	1948	830	9,118	9,948	5.6	39,688	3,195	1,695	39.4	411	15.6	10,000	13.0	71.4
	Central of Pennsylvania 1949	2,863	3,049	5,912	11.1	42,990	3,120	1,563	33.4	484	21.3	12.707	14.6	60.6
	1948	880	3,807	4,687	9.4	39,070	3,040	1,694	41.0	897	31.1	19,836	14.0	79.4
	Chicago & Eastern Ill 1949	2,987	3,614	6,601	11.4	38,310	2,312	1,069	29.1	597	29.5	4,477	16.6	94.3
	1948	1,781	4,257	6,038	5.7	37,423	2,361	1,147	32.7	962	42.6	6,402	16.1	77.8
	Elgin, Joliet & Eastern 1949	6,456	9,663	16,119	1.5	22,060	2,859	1,492	39.9	241	9.5	16,815	8.1	110.3
	1948	6,460	14,162	20,622	1.4	19,848	2,928	1,624	42.5	261	8.9	20,660	7.2	98.4
	Pennsylvania System 1949	143,779	87,031	230,810	14.5	44,530	3,021	1,420	32.4	513	24.0	11,809	15.2	61.7
	1948	113,878	127,763	241,641	9.3	39,889	3,027	1,527	36.0	735	30.9	17,760	13.6	80.4
	Reading 1949	16,913	13,012	29,925	8.5	35,175	2,715	1,401	39.8	494	19.8	11,231	13.0	57.8
	1948	12,085	21,233	33,318	7.4	37,187	2,970	1,666	43.7	738	25.0	18,037	12.5	77.0
	Western Maryland 1949	8,376	3,036	11,412	1.4	38,460	2,764	1,505	42.5	611	22.0	7,859	14.1	34.9
	1948	4,217	3,250	7,467	1.3	32,262	3,092	1,709	46.0	1,632	57.6	14,003	10.6	62.0
Pocahontas Region	Chesapeake & Ohio 1949	64,439	21,592	86,031	6.4	52,436	3,083	1,601	40.7	639	26.6	10,834	17.1	56.9
	1948	47,951	28,576	76,527	2.1	56,108	3,671	2,095	48.0	1,482	52.5	22,637	15.5	94.3
	Norfolk & Western 1949	43,838	6,226	50,064	5.2	57,628	3,443	1,763	40.8	599	24.4	13,923	16.9	59.9
	1948	27,527	8,153	35,680	3.0	64,989	4,097	2,267	48.5	1,787	62.8	29,282	16.1	105.9
Southern Region	Atlantic Coast Line 1949	13,364	13,068	26,432	5.6	30,251	1,869	831	30.7	718	37.8	3,415	16.3	56.1
	1948	8,374	17,760	26,134	3.9	27,429	1,681	788	31.3	866	41.4	3,951	16.4	73.6
	Central of Georgia 1949	3,356	4,968	8,324	9.8	30,626	1,747	813	29.9	835	39.8	3,906	17.6	86.3
	1948	1,930	6,426	8,356	6.9	29,793	1,658	805	31.6	964	42.4	4,318	18.0	92.8
	Gulf, Mobile & Ohio 1949	4,147	11,764	15,911	2.0	57,099	3,088	1,432	29.7	998	46.9	5,199	18.5	108.3
	1948	2,552	12,053	14,605	1.8	54,609	2,999	1,461	30.8	1,131	49.3	5,804	18.3	84.9
	Illinois Central 1949	25,436	32,199	57,635	1.8	43,737	2,536	1,184	31.5	953	46.1	7,996	17.4	75.6
	1948	16,266	36,899	53,165	1.7	44,919	2,572	1,232	33.1	1,153	53.3	8,941	17.7	80.0
	Louisville & Nashville 1949	47,188	12,623	59,811	6.5	29,980	1,858	929	34.0	548	24.5	6,619	16.2	84.9
	1948	29,425	16,041	45,466	3.2	30,586	1,945	1,013	38.2	1,087	45.2	10,084	15.8	111.3
	Nash., Chatt. & St. Louis 1949	3,296	3,973	7,269	12.5	36,100	1,868	862	28.5	727	34.6	5,073	19.4	105.5
	1948	832	5,267	6,099	3.7	29,606	1,545	763	31.2	1,098	45.5	6,380	19.3	107.6
	Seaboard Air Line 1949	10,632	11,595	22,227	2.5	36,770	2,146	975	31.4	903	44.8	4,845	17.5	76.6
	1948	6,513	15,466	21,979	1.4	35,569	2,090	988	31.6	1,012	47.0	5,284	17.4	80.7
	Southern 1949	17,580	27,413	44,993	5.0	34,924	2,050	890	26.8	725	39.1	5,321	17.1	56.5
	1948	12,894	30,615	43,509	4.0	29,661	1,721	794	29.3	941	45.4	6,414	17.4	80.8
Northwestern Region	Chicago & North Western 1949	21,526	32,196	53,722	3.1	35,679	2,426	1,074	30.5	600	30.0	3,996	15.5	80.0
	1948	19,761	37,740	57,501	2.5	35,105	2,394	1,077	31.0	646	31.8	4,558	15.4	88.0
	Chicago Great Western 1949	1,611	5,386	6,997	5.6	58,910	3,284	1,389	26.9	1,115	61.0	5,450	18.0	143.1
	1948	1,246	5,972	7,218	4.4	46,567	2,779	1,231	28.7	1,330	67.0	6,302	16.8	122.0
	Chic., Milw., St. P. & Pac. 1949	30,172	30,175	60,347	2.3	38,591	2,386	1,040	28.8	728	38.5	4,319	16.4	89.7
	1948	22,744	41,611	64,355	2.0	37,056	2,397	1,107	32.3	901	43.5	5,412	15.6	107.7
	Chic., St. P., Minn. & Omaha 1949	1,035	7,632	8,667	2.9	25,467	1,980	872	29.9	615	30.4	3,487	13.4	76.2
	1948	1,130	9,349	10,479	3.5	24,104	1,919	905	31.9	644	28.5	4,067	13.3	81.7
	Duluth, Missabe & Iron Range 1949	14,351	365	14,716	3.4	89,122	5,402	3,263	61.2	1,033	33.3	26,345	17.3	127.1
	1948	13,934	520	14,454	2.7	84,779	5,240	3,183	58.0	1,156	38.5	29,637	17.0	131.1
	Great Northern 1949	24,659	26,042	50,701	2.5	46,289	3,061	1,444	36.3	1,108	51.2	7,006	15.3	96.2
	1948	21,720	26,624	48,344	2.3	47,051	3,123	1,564	38.0	1,310	54.8	7,820	15.3	100.5
	Minneap., St.P. & S. Ste. M 1949	6,887	8,270	15,157	4.9	40,330	2,330	1,111	32.1	927	43.3	3,598	17.4	119.1
	1948	6,151	12,109	18,260	4.4	39,631	2,381	1,146	33.3	1,009	46.3	4,503	16.9	139.5
	Northern Pacific 1949	18,978	16,435	35,413	5.0	46,411	2,758	1,249	31.8	1,029	48.8	5,873	16.9	93.6
	1948	18,921	21,816	40,737	5.0	44,735	2,852	1,333	33.2	1,072	49.7	6,629	15.8	96.9
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) 1949	45,041	29,557	74,598	4.9	53,256	2,622	1,019	24.7	1,050	61.3	6,028	20.4	100.6
	1948	38,812	34,092	72,904	5.4	49,973	2,539	1,058	27.2	1,267	66.7	7,229	19.8	111.5
	Chic., Burl. & Quincy 1949	18,148	25,688	43,836	3.9	50,385	2,716	1,167	27.7	1,131	61.2	5,407	18.6	84.3
	1948	12,656	29,573	42,229	2.7	50,075	2,832	1,282	30.9	1,366	68.0	6,661	17.7	96.4
	Chic., Rock I. & Pac. 1949	9,965	26,232	36,197	3.6	41,515	2,340	1,039	28.7	1,067	55.4	4,719	17.8	100.3
	1948	9,212	24,311	33,523	3.5	38,529	2,151	995	30.3	1,077	51.7	4,884	18.0	108.4
	Denver & R. G. Wn. 1949	9,002	7,839	16,841	4.4	40,605	2,395	1,091	30.1	772	36.3	5,684	17.1	84.3
	1948	6,981	10,501	17,482	3.7	36,457	2,256	1,070	30.9	930	40.4	6,886	16.3	99.2
	Southern Pacific 1949	27,004	38,467	65,471	4.7	46,065	2,910	1,154	26.7	1,153	66.0	9,344	16.0	94.9
	1948	25,680	40,911	66,591	3.3	44,446	2,883	1,216	28.0	1,267	65.6	10,817	15.6	110.9
	Union Pacific 1949	26,035	37,877	63,912	3.6	63,537	2,881	1,155	27.2	1,440	82.8	9,549	22.5	116.4
	1948	24,935	38,732	63,667	3.2	59,697	2,770	1,134	26.5	1,529	87.1	10,361	22.0	134.8
	Western Pacific 1949	2,316	4,054	6,370	8.6	56,312	2,809	1,268	27.0	1,727	81.9	8,161	20.1	78.8
	1948	2,216	3,116	5,332	8.4	53,151	2,697	1,270	27.5	2,024	91.4	9,082	19.8	85.1
Southwestern Region	International-Gt. Northern* 1949	774	5,862	6,636	1.8	42,171	2,395	1,146	33.6	882	38.6	5,244	17.8	72.8
	1948	423	6,607	7,030	1.0	38,218	2,179	1,018	32.9	899	40.3	5,861	17.7	87.0
	Kansas City Southern 1949	1,621	6,775	8,396	7.3	58,094	3,270	1,462	29.7	1,160	57.5	10.371	17.9	130.9
	1948	1,174	6,041	7,215	3.9	64,622	3,393	1,607	32.0	1,289	59.2	11,218	19.1	119.4
	Mo.-Kans.-Texas Lines 1949	3,113	10,292	13,405	3.5	42,080	2,290	997	27.5	1,149	62.1	4,594	18.5	109.6
	1948	2,125	10,231	12,356	.6	37,381	2,085	911	29.8	1,445	78.6	5,679	18.1	147.4
	Missouri Pacific† 1949	....	....	....	..	....	....	....	..	..	..	....	..	..
	1948	....	....	....	..	....	....	....	..	..	..	....	..	..
	Texas & Pacific 1949	2,063	6,222	8,285	6.2	47,972	2,433	993	27.1	1,119	62.7	4,959	19.8	85.6
	1948	1,592	7,986	9,578	2.9	45,878	2,362	1,021	29.6	1,622	84.7	8,305	19.5	138.5
	St. Louis-San Francisco 1949	9,147	16,800	25,947	2.8	38,444	2,289	1,034	29.9	1,056	52.5	5,520	16.9	84.2
	1948	5,539	14,469	20,008	2.2	39,251	2,024	918	30.7	1,150	55.7	5,011	19.5	80.6
	St. Louis Southw. Lines 1949	1,487	7,632	9,119	1.3	46,563	2,472	1,105	26.1	1,755	92.0	8,564	18.9	122.8
	1948	1,617	6,405	8,022	1.1	46,357	2,525	1,129	27.3	1,746	86.0	8,396	18.4	119.6
	Texas & New Orleans 1949	4,027	18,906	22,933	3.5	39,684	2,111	935	29.0	1,137	57.0	5,713	19.0	112.6
	1948	3,339	18,380	21,719	2.8	36,564	1,895	870	30.2	1,259	58.9	6,222	19.5	133.0

*Report of trustee or trustees.
†No report received.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

The "Low-down" on HIGH Availability

NEARLY everyone knows that General Motors locomotives have broken every performance record in modern railroading. By the very nature of their design, they need less time out for maintenance.

But, there is still another factor back of every Diesel locomotive—and behind it *for life*—to insure its *high* availability. *It's the supply of genuine EMD Parts for every model ever built.*

"Parts" is a highly specialized business at Electro-Motive—first, in the progressive engineering program which works constantly to improve parts life and performance for both current and older model locomotives; second, in the modern distribution methods employed; third, in the genuine interest EMD has in assisting in emergencies or in any problem in connection with your parts requirements.

A network of six strategically located Branch Warehouses — in addition to the new and modern Parts Center at La Grange — bolsters the railroad's reserve stock.

This inside "picture story" shows how warehousing facilities at Electro-Motive have been expanded to keep distribution far ahead of current and even projected parts demands. All these highlights explain how this phase of maintenance contributes to the *high* availability of every General Motors Diesel locomotive.

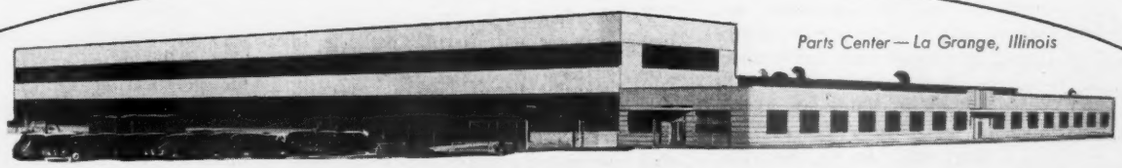
Lift-trucks and every possible mechanized equipment permit modern palletized handling methods replacing the time-consuming, back-breaking operation of yesterday. Clear identification of parts likewise speeds both incoming and outgoing material.

1,500 items a day move over this mechanized conveyor line at the new EMD Parts Headquarters, La Grange.

Receiving and shipping are both indoor operations in the new Parts Center at Electro-Motive. Overhead crane and power trucks hustle shipments into waiting cars or trucks.

ctro-Motive's "location method" of parts storage is a big t cut. The file in the foreground houses location cards, ng part number, description and location for rapid k-picking to fill orders.

Rows of steel bins in the Parts Center, at La Grange, are capable of housing more than 26,000 different items. These are located beside the mechanical shipping line for rapid order consolidation.



Parts Center — La Grange, Illinois

ELECTRO-MOTIVE

DIVISION OF GENERAL MOTORS LA GRANGE, ILL.

GENERAL MOTORS LOCOMOTIVES

Home of the Diesel Locomotive

GENERAL NEWS

(Continued from page 71)

Enjoin I.C.C. Orders Limiting R.I. Motor Transit Operations

A three-judge federal court at Chicago has "set aside, annulled, and enjoined" reports and orders of the Interstate Commerce Commission which would restrict the Rock Island Motor Transit (subsidiary of the Chicago, Rock Island & Pacific) to operations auxiliary to, or supplemental of, train service. The issues involved are similar to those in the case of the Texas & Pacific Motor Transport (subsidiary of the T. & P.), the outcome of which was reported in the *Railway Age* of December 3, page 60.

The I.C.C., in both cases, sought to limit the railroad trucking subsidiaries to movement of only those shipments received from the railroad on railroad billing at railroad rates. The reports and orders voided in the Rock Island case were those entered in Dockets No. MC-F-445, the R. I. Motor Transit Company-purchase-White Line Motor Freight Company, et al.; MC-F-2327, the R. I. Motor Transit Company-purchase-J. H. Frederickson and D. H. Frederickson; and No. MC-29130 (formerly No. MC-49147), the R. I. Motor Transit Company, common carrier application (see *Railway Age* of May 7, page 59).

Won't Ban Transcontinental "Air Coach" Rate of $110

The Civil Aeronautics Board has announced that it will not suspend tariffs of American Airlines and Transcontinental & Western Air, which publish a transcontinental "air coach" fare of $110 effective December 27. That rate, which will apply between New York and Los Angeles, Cal., compares with a one-way railroad coach fare of $71.42 between the same points, both fares being subject to the 15 per cent federal tax.

American and T.W.A. each propose operation of one daily round-trip "coach" between New York, Chicago, and Los Angeles. Both will use DC-4 planes at the outset, the T.W.A. planes having 60 seats and the American planes 70. The tariffs are published to expire December 31, 1950. What the C.A.B. announcement called "certain normal passenger services, including meals," will be eliminated; but no limitations on departure or arrival times are involved.

In failing to require such limitations, the C.A.B. modified its "air coach" policy as set out in a statement issued September 7 (see *Railway Age* of September 17, page 93). As to that, the present announcement explained that the board requires such limitations "to confine coach operations to off-peak periods of the day." It added that, in transcontinental service, "there appeared to be no well-defined peaks, both daytime and late evening departures being provided in present schedules." Thus it was felt that relief from the limitations was necessary to enable American and T.W.A. "to schedule the coach flights in such a way as to minimize diversion of traffic from their regular services." At the same time the announcement emphasized that granting of this relief "does not represent a change in the board's belief in the desirability of scheduling coach service during off-peak periods."

American Companies to Share In Labrador Ore Development

A group of American steel companies have taken an option to participate with Canadian interests in development of Quebec and Labrador iron ore, Jules R. Timmins, president of the Labrador Mining & Exploration Co., and of Hollinger North Shore Exploration Company, which have been conducting exploratory work for the past few years, announced on November 28.

A new Canadian company, Hollinger-Hanna, Ltd., will manage the operations, and an American company, the Iron Ore Company of Canada, in which the steel companies will participate with Canadian interests, will finance the undertaking. Participants include the Labrador Mining & Exploration Co., the Hollinger North Shore Exploration Company, and Hollinger Consolidated Gold Mines, from Canada, and Republic Steel Corporation, Armco Steel Corporation, National Steel Corporation, Wheeling Steel Corporation, Youngstown Sheet & Tube Co., and the Hanna Coal & Ore Corp., from the United States. A great deal of additional exploratory, development and engineering work is yet to be done, and it will be at least another year or two before any start can be made on construction.

"The plan contemplates," said Mr. Timmins, "construction of 360 mi. of railroad from the mines to Seven Islands on the St. Lawrence river, terminal and port facilities at Seven Islands, development of the mining properties, electrical power development, and building the communities required for eventual production and transportation of 10 million tons of iron ore a year." While no accurate estimates of cost are available, from $150 million to $200 million may be required, Mr. Timmins added.

Third-Quarter Truck Traffic Up 6.7 Per Cent

Freight hauled by intercity Class I motor carriers increased 6.7 per cent in this year's third quarter as compared with the same period last year, according to American Trucking Associations. The A.T.A. statement pointed out that this represented a larger relative increase than that reported for either the first or second quarters, when traffic was up 2.9 per cent and 1.9 per cent, respectively, from the comparable 1948 quarters.

The third-quarter showing was attributed to "a stepped-up movement of special commodities, particularly automobiles." At the same time, tonnage hauled by carriers of general freight increased 5.5 per cent, compared with a 1.7 per cent decrease in the second quarter. Increases were reported for all regions except the Northwestern, where tonnage was 0.8 per cent below that of 1948's third quarter. Regional increases ranged from 0.2 per cent in New England to 15.1 per cent in the Middle West.

The comparisons were based on reports of 1,368 truckers, which hauled 33,511,763 tons of freight in this year's third quarter, as compared with 31,409,128 tons in the like 1948 period.

Waybill Studies

Three additional waybill studies have been issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission: Statement No. 4942, Traffic and Revenue in the Products of Agriculture Group, by Commodity Class, Territorial Movement, Length of Haul (short line), and Type of Rate—All Terminations in 1948; Statement No. 4943, Distribution of Freight Traffic and Revenue Averages for Commodity Groups and Selected Classes by Rate Territories—Terminations in First Quarter of 1949; and Statement No. 4947, Traffic and Revenue in the Animals and Products Group, by Commodity Class, Territorial Movement, Length of Haul (short line), and Type of Rate — All Terminations in 1948.

Package-Freight Embargoes Cut F.B.L.'s Deficit

The government-owned Inland Waterways Corporation, operator of the Federal Barge Lines, reported a consolidated net deficit of $1,000,065 for the fiscal year ended June 30, 1949, as compared with a fiscal 1948 deficit of $2,312,341. Embargoes which had the effect of limiting the service offered "contributed materially to the greatly improved financial showing in fiscal 1949," the annual report said.

The report, submitted to the secretary of commerce by I.W.C. President A. C. Ingersoll, Jr., was made public by the Commerce Department on November 23. It showed that I.W.C.'s gross operating revenue for fiscal 1949 was $10,199,051 as compared with $8,235,826 in fiscal 1948. Meanwhile operating expenses increased only from fiscal 1948's $10,555,969 to $10,702,950.

The embargoes which "contributed materially" to the improved showing were in effect during the first half of the fiscal year, and they "greatly curtailed the movement of package or merchandise freight," the report explained. In this connection, it will be recalled that arguments in opposition to liquidation of I.W.C. and withdrawal of the government from the water transportation busi-

News Department continued on next left-hand page

Racor Switch Point Locks

Fig. 3911
SWITCH POINT LOCK
(Patented)

Provide added protection for New York Central's passenger train operation.

Essential to the safe operation of these trains, facing point switches must be secured in a closed position, regardless of failure or damage to the throwing mechanism. Racor Switch Point Locks can be installed with all designs of main line switch stands. Ruggedly designed — easily installed below top of ties as protection against damage, they function independently of stand.

Fig. 3911 (illustrated) for use with all types of column throw stands.
Fig. 3912 available for use with all types of ground throw stands.

America's most complete line of track specialties

AUTOMATIC SWITCH STANDS

VERTICAL SWITCH RODS

SAMSON SWITCH POINTS

SWITCH POINT LOCKS

RAIL LUBRICATORS

DEPTH HARDENED CROSSINGS

REVERSIBLE MANGANESE STEEL CROSSINGS

MANGANESE STEEL GUARD RAILS

AMERICAN Brake Shoe COMPANY

RAMAPO AJAX DIVISION
109 North Wabash Avenue, Chicago 2, Ill.

RACOR
TRADE MARK

Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 128 reports (Form 1BS) representing 132 steam railways
SWITCHING AND TERMINAL COMPANIES NOT INCLUDED

Income Items	United States For month of August 1949	1948	For the eight months of 1949	1948
1. Net railway operating income	$65,727,319	$115,709,718	$429,505,049	$631,899,245
2. Other income	15,685,638	14,906,589	138,290,692	144,497,776
3. Total income	81,412,957	130,616,307	567,795,741	776,397,021
4. Miscellaneous deductions from income	2,950,428	4,749,457	24,309,611	43,856,784
5. Income available for fixed charges	78,462,529	125,866,850	543,486,130	732,540,237
6. Fixed charges:				
6–01. Rent for leased roads and equipment	10,952,252	11,409,716	78,469,579	87,664,188
6–02. Interest deductions[1]	24,878,837	25,021,315	198,212,536	193,296,561
6–03. Other deductions	218,166	168,256	1,585,217	1,198,190
6–04. Total fixed charges	36,049,255	36,599,287	278,267,332	282,158,939
7. Income after fixed charges	42,413,274	89,267,563	265,218,798	450,381,298
8. Other deductions	3,351,983	3,422,112	25,156,797	25,684,954
9. Net income	39,061,291	85,845,451	240,062,001	424,696,344
10. Depreciation (Way and structures and Equipment)	34,668,869	31,547,870	268,330,087	246,445,572
11. Amortization of defense projects	1,321,223	1,380,987	10,921,215	11,278,843
12. Federal income taxes	26,058,705	50,913,666	173,646,461	271,671,271
13. Dividend appropriations:				
13–01. On common stock	22,789,882	21,621,964	117,449,185	107,084,027
13–02. On preferred stock	4,644,588	4,318,935	44,422,908	39,275,816
Ratio of income to fixed charges (Item 5 ÷6—04)	2.18	3.44	1.95	2.60

Selected Expenditures and Asset Items	United States Balance at end of August 1949	1948
17. Expenditires (gross) for additions and betterments—Road	$219,794,339	$207,967,318
18. Expenditures (gross) for additions and betterments—Equipment	682,266,671	553,822,512
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	522,108,598	533,963,441
20. Other unadjusted debits	137,284,471	144,884,654
21. Cash	760,921,812	994,478,316
22. Temporary cash investments	851,406,992	987,328,672
23. Special deposits	98,224,641	114,247,465
24. Loans and bills receivable	560,300	12,816,781
25. Traffic and car-service balances—Dr.	49,750,815	57,208,927
26. Net balance receivable from agents and conductors	130,098,544	140,920,662
27. Miscellaneous accounts receivable	285,082,211	351,717,068
28. Materials and supplies	814,429,961	824,659,947
29. Interest and dividends receivable	15,100,234	17,254,220
30. Accrued accounts receivable	158,808,813	188,240,388
31. Other current assets	39,498,469	45,727,987
32. Total current assets (items 21 to 31)	3,203,882,792	3,734,600,433
Selected Liability Items		
40. Funded debt maturing within 6 months[2]	$122,016,669	$106,004,686
41. Loans and bills payable[3]	4,425,188	3,150,000
42. Traffic and car-service balances—Cr.	75,577,917	91,003,905
43. Audited accounts and wages payable	504,058,222	580,086,988
44. Miscellaneous accounts payable	191,061,621	228,763,003
45. Interest matured unpaid	25,310,708	27,454,551
46. Dividends matured unpaid	8,242,073	8,597,155
47. Unmatured interest accrued	80,000,217	78,625,099
48. Unmatured dividends declared	41,185,323	36,211,763
49. Accrued accounts payable	164,436,809	216,252,026
50. Taxes accrued	722,518,410	749,479,835
51. Other current liabilities	79,912,060	104,399,376
52. Total current liabilities (Items 41 to 51)	1,896,728,548	2,124,023,701
53. Analysis of taxes accrued:		
53–01. U. S. Government taxes	544,021,176	581,380,961
53–02. Other than U. S. Government taxes	178,497,234	168,098,874
54. Other unadjusted credits	267,212,503	302,059,318

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.
[3] Includes obligations which mature not more than one year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

ness have been bottomed on contentions that the corporation's operations were necessary to provide a merchandise-freight service which was not offered by private barge lines.

Public reaction to the embargoes was "bitter," and they were lifted shortly after the middle of the fiscal year, President Ingersoll reported. And, despite the embargoes, the merchandise tonnage handled in the year under review "approximately equalled" that of fiscal 1948 although it represented only 22 per cent of the total tonnage, as compared with 30 per cent in fiscal 1948.

In fiscal 1949, the corporation handled in its own barges a total of 2,705,314 tons of freight, an increase of 31.9 per cent above the 2,051,484 tons handled in the previous year. Meanwhile, the tonnage handled for the account of others decreased 18.8 per cent—from 402,750 tons in fiscal 1948 to 327,183 tons in fiscal 1949.

The report referred to what it called "an important milestone" that was reached during fiscal 1949 "in the recognition of the principal that shippers may not be deprived of the advantages of water transportation." It explained that this recognition "was obtained by action of the railroads in removal of restrictions against rail proportional rates on ex-barge grain into the Southeast."

State Court Rules Can't Modify Federal Employers' Liability Act

Forms of local practice and "procedure" by state courts cannot be used to defeat rights of recovery guaranteed by federal laws such as the Federal Employers' Liability Act, the United States Supreme Court said on November 21, in handing down a 6-2 decision in the case of Brown v. Western Railway of Alabama.

In an opinion delivered by Justice Black, with Justices Frankfurter and Jackson dissenting, the high court reversed the Georgia State Court of Appeals which had upheld dismissal of the case by the trial court on the grounds that Brown, the plaintiff, had failed to "set forth a cause of action."

Brown originally brought suit under the Liability act, claiming that he was injured while on duty when he stepped on a large clinker lying beside the tracks in a railroad yard. The complaint also stated that the railroad allowed "clinkers" and other debris "to collect in the yards along the side of the tracks," and that such debris made the yards "unsafe."

The trial court dismissed the case as noted above, and was upheld by the Court of Appeals. The Supreme Court then agreed to hear the case because "the implications of dismissal were considered important to a correct and uniform application of the federal act in the state and federal courts."

The high court found that the allegations in the case, if proven, would show an injury "of the precise kind for which Congress had provided a recovery," and that, by dismissing the case, the trial court had, in effect, deprived Brown of the right of trial granted him by Congress.

While the Georgia court admitted that contributory negligence does not preclude recovery under the F.E.L.A., that court had followed the practice of construing pleading allegations "most strongly against the pleader," the Supreme Court said. In following that rule the lower court declared that "the inference arises that the plaintiff's vision was unobscured and he could have seen and avoided the clinker." The Supreme Court said that such rules of "practice" by state courts can dig into "substantive rights" guaranteed by law.

With the ruling that Brown did have a cause of action sufficient "to permit introduction of evidence from which a jury might infer that his injuries were due to the railroad's negligence in failing to supply a reasonably safe place to work," the Supreme court remanded the case "for further proceedings not inconsistent with this opinion."

ANNOUNCEMENT

By vote of the stockholders of the American Arch Company, at a meeting held on November 29th, 1949, it was decided to discontinue its operation and to dissolve the corporation.

The various arch brick suppliers, with whom the Company has dealt, have made arrangements to continue to furnish the Company's customers with materials and engineering services as they may be required.

The Company takes this occasion to express its appreciation of the confidence shown by its customers in purchasing its products over so long a period of years.

J. D. Brandon
PRESIDENT

American Arch Company Inc.

NEW YORK • CHICAGO

Current Publications

PERIODICAL ARTICLES

Inland Transportation in France: Restoration Means Much to Europe, by Henry Baskin. Foreign Commerce Weekly, October 24, 1949, pp. 8-9, et seq. Available from the Government Printing Office, Washington 25, D. C. Single copies, 20 cents.

Mr. Baskin reviews highway, railway and waterway transportation in France. He also discusses reconstruction since the war and attempts at coordination. In discussing railway transportation he outlines the areas and types of industries served by each of the five operational divisions of the French National Railroads.

Our Transportation Mess. Fortune, November, 1949, pp.85-87. Published by Time, Inc., 540 N. Michigan ave., Chicago 11, Ill. Single copies, $1.25.

Review and comment on the Brookings Institution study entitled "National Transportation Policy," by Charles L. Dearing and Wilfred Owen. Reprints are available from the Eastern Railroad Presidents Conference, 143 Liberty st., New York 6. (See also editorials in *Railway Age*, October 29, pp. 27-28, and November 12, pp. 35-36.)

Transportation Trends Today in Selected Sugar-Plantation Areas, by John E. Nightingale. Foreign Commerce Weekly, November 28, 1949, page 6. Available from the Government Printing Office, Washington 25, D. C. Single copies, 20 cents.

An examination of transportation trends in selected sugar-plantation areas indicates that Cuba still uses railroads, while Hawaii is a big user of motor transport. A definite trend toward motor haulage of cane from plantation to mill and in some instances to ports has been noted in Puerto Rican plantation areas, while motor transport on sugar plantations of Haiti and the Dominican Republic is presently of negligible importance.

TRADE PUBLICATIONS

Aircomatic Process. 4 pages, illustrations. Published by the Air Reduction Sales Company, 60 East Forty-Second st., New York 17.

A folder on the recently introduced Aircomatic process—a gas-shielded, metal-arc method of welding which permits the joining of heavy sections of aluminum, aluminum bronze and stainless steel in all positions. The features of the process and equipment are described, and the illustrations include photographs of work done by this process.

Bucking Snow Costs. 8 pages, illustrations. Published by the Caterpillar Tractor Company, Peoria 8, Ill.

Presents first-hand data on practical and low-cost snow removal with Caterpillar equipment.

New "Red Devil" Coal Car Shaker. Bulletin No. 72. Published by the Ross & White Co., Chicago Daily News building, Chicago.

Describes and illustrates a device which,

when placed against the side of a hopper car loaded with coal, sand, gravel, crushed stone or other bulk materials, sets up a vibratory action that speeds discharge of the car's contents. To emphasize the time-saving possibilities of the shaker, the bulletin cites actual case histories.

Improved Industrial Vision—a Bonus for Management, a Benefit for Employees. 24 pages. Published by the American Optical Company, Southbridge, Mass.

Describes sight-conservation programs for industry, which, in providing a rapid check of employee vision, screen those who require correction for maximum safety and efficiency. The publication features case histories and charts demonstrating the cost saving values of such programs.

Pettibone Mulliken Products for the Railroad Industry. 4 pages, illustrations. Published by the Pettibone Mulliken Corporation. 4700 West Division st., Chicago 51.

A folder on the equipment manufactured by this company for material handling on railroads. The equipment described includes conveyors, car unloaders, bucket loaders, buckets, ballast crushing plants, and the PMCO Speedloader.

New American Model 410 Dtesel Locomotive Crane. 4 pages. illustrations. Published by the American Hoist & Derrick Co., St. Paul 1, Minn.

Presents the design features and specifications of this company's new 10-ton unit—a "small crane packed with big crane qualities."

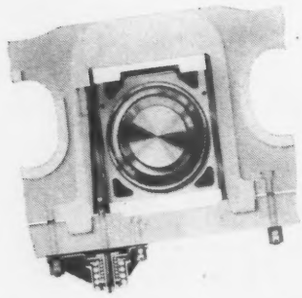
BOOKS

Tandem Compound Locomotives; A Historical Review, by P. M. Kalla-Bishop. 70 pages, illustrations, drawings. Published by Kalla-Bishop Books, 4 Temple Fortune court, London, N. W., 11, England. $1.25 in paper; $1.75 in cloth.

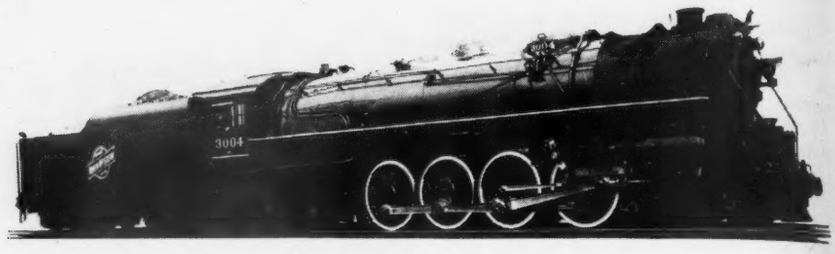
Covers early experiments, European developments, engines of John Player and the tandems of the American Locomotive Company. A folded insert contains principal dimensions of the tandem compound locomotives of the world.

The House of Baring in American Trade and Finance; English Merchant Bankers at Work, 1763-1861, by Ralph W. Hidy. 631 pages, illustrations. Published by the Harvard University Press, Cambridge, Mass. $7.50.

Dr. Hidy tells the story of the first one hundred years of this famous banking house. In particular, he tells the story of its preoccupation with the developing American economy. From 1825 to 1861, in a period when the flow of European capital constituted one of the chief stimuli to an amazingly rapid expansion of that economy, Baring Brothers & Co. led all other firms in the world in financing American trade and marketing American bonds. It facilitated the operations of American merchants in Europe, Asia, and the Americas, and furthered the creation of canals, banks, and railroads in the United States. It played an important part in the migration of investment and working capital from Britain to America.



Franklin Compensators and Snubbers help C&NW



cut maintenance cost to less than 20c per mile, with availability near 90% on heavy 4-8-4's

A Railway Age article in the November 12th issue gives details on an outstanding locomotive performance record. It describes Chicago & North Western's experience with its Class H-1 locomotives since modernizing them three years ago—how they have an availability near 90 per cent and a maintenance cost of less than 20 cents per mile. These are exceptional figures for any heavy 4-8-4's.

Installation of Franklin Automatic Compensators and Snubbers was part of this modernization program. This device protects roller bearing assemblies from abnormal shocks. It extends tire mileage—and undoubtedly contributed to the doubling of tire mileage between Lidgerwooding on the H-1's. Even more specifically, it cuts wear and minimizes failure of crank pins and rod bearings. Here is what the article has to say:

"To date the only crank pin that has required renewal on the 23 H-1's is the left front pin on the 3004 . . . Rod bushings are renewed at annual inspections, and to date there have been no H-1 locomotives tied up for bushing troubles.

"The floating plates on the No. 1 and No. 4 drivers of the 3004 did not require any attention after 300,000 miles. The No. 2 and No. 3 plates were replaced with 1/8-in. oversize plates so that the original shoes and wedges could be used again. No work was required on any of the shoes and wedges; all were used again without any attention. The maximum rise of the wedges was about 1 1/2 in. None stuck in service at any time."

The North Western has saved enough in maintenance alone to repay the entire cost of this modernization in less than three years. Compensators and Snubbers earned their full share of the savings.

FRANKLIN RAILWAY SUPPLY COMPANY

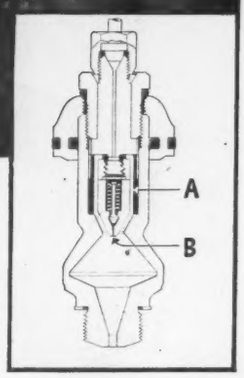
A CORPORATION

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
FIRE DOORS • DRIVING BOX LUBRICATORS • OVERFIRE JETS • JOURNAL BOXES • FLEXIBLE JOINTS • CAR CONNECTION

There's always A JOB FOR A 'DOZER

Handiest team on the right of way is a "Caterpillar" Diesel Tractor with a matching "Caterpillar" 'Dozer. This team is working round the clock on snow removal on the main line of the Union Pacific Railroad in Nebraska. It did heroic work during the big blizzard. Now it's 'dozing ice and snow clear of culverts to get set for spring thaws.



HI-EFFICIENCY FUEL INJECTION VALVES

Typical of the quality built into "Caterpillar" Diesel Tractors are the fuel injection valves. Capsule (A) is easily removable for unit replacement in the field. No adjustments are ever necessary. Large single orifice opening at (B) prevents clogging and maintains desirable fuel spray characteristics at all times. Countless "Caterpillar" Engines have operated many thousands of hours without the need for capsule replacements.

What's the next job slated for this husky? There's no telling, for "Caterpillar" 'Dozer units can turn their hands to many other vital maintenance tasks. For instance, daylighting cuts . . . widening existing drainage facilities . . . building up inadequate fills . . . on switch and spur roadbed construction . . . and as stand-by units on wrecking trains.

Made by one manufacturer, "Caterpillar" Diesel Tractors and 'Dozers are perfectly matched to stay in there pitching day after day for you with a minimum of down time. On tough jobs all over the country they've proved their worth. Ask your "Caterpillar" dealer—he'll be glad to show you what these all-year-round workers can do for you.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS

CATERPILLAR
REG. U. S. PAT. OFF.
DIESEL ENGINES • TRACTORS
MOTOR GRADERS
EARTHMOVING EQUIPMENT

GUN IRON for wearing-parts:

Gun Iron overcomes many erosion problems

WHEN subjected to erosion, ordinary cast iron parts often present a serious service problem. The photograph at the left above illustrates what coolant water can do to a marine diesel cylinder liner after a few months' service. In some cases these liners are cavitated to the point of being useless long before they would have to be replaced because of cylinder wear.

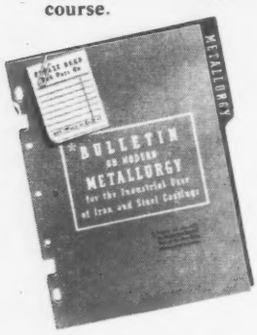
Cast Gun Iron cylinder liners have practically eliminated these problems wherever they have been tried. The dense, close-grained physical structure of Gun Iron is ideally suited to resist erosion and cavitation.

Gun Iron is also widely used for its resistance to frictional wear, pressure, impact and high heats in the railroad, petroleum and metal-working fields. In addition to superior physical properties, Gun Iron castings have uniform quality. This is possible because we carefully produce Gun Iron and its alloys in our own air furnaces, cast it and can machine the castings into precision parts, if desired.

If you use cast parts in your product, it will pay you to investigate Gun Iron's unusual physical properties as well as Hunt-Spiller's unusual facilities for producing them. Our engineers stand ready to discuss your problems with you.

What is
GUN IRON?

You'll find all the answers as well as valuable information on other metals and alloys in this interesting metallurgical bulletin. Write for it on your company letterhead. No obligation, of course.



HUNT • SPILLER GUN IRON • AIR FURNACE PROCESS • HSGI

HUNT • SPILLER
MANUFACTURING CORPORATION

379 DORCHESTER AVENUE • SOUTH BOSTON 27, MASS.

Canadian Representatives: Joseph Robb & Co., Ltd.
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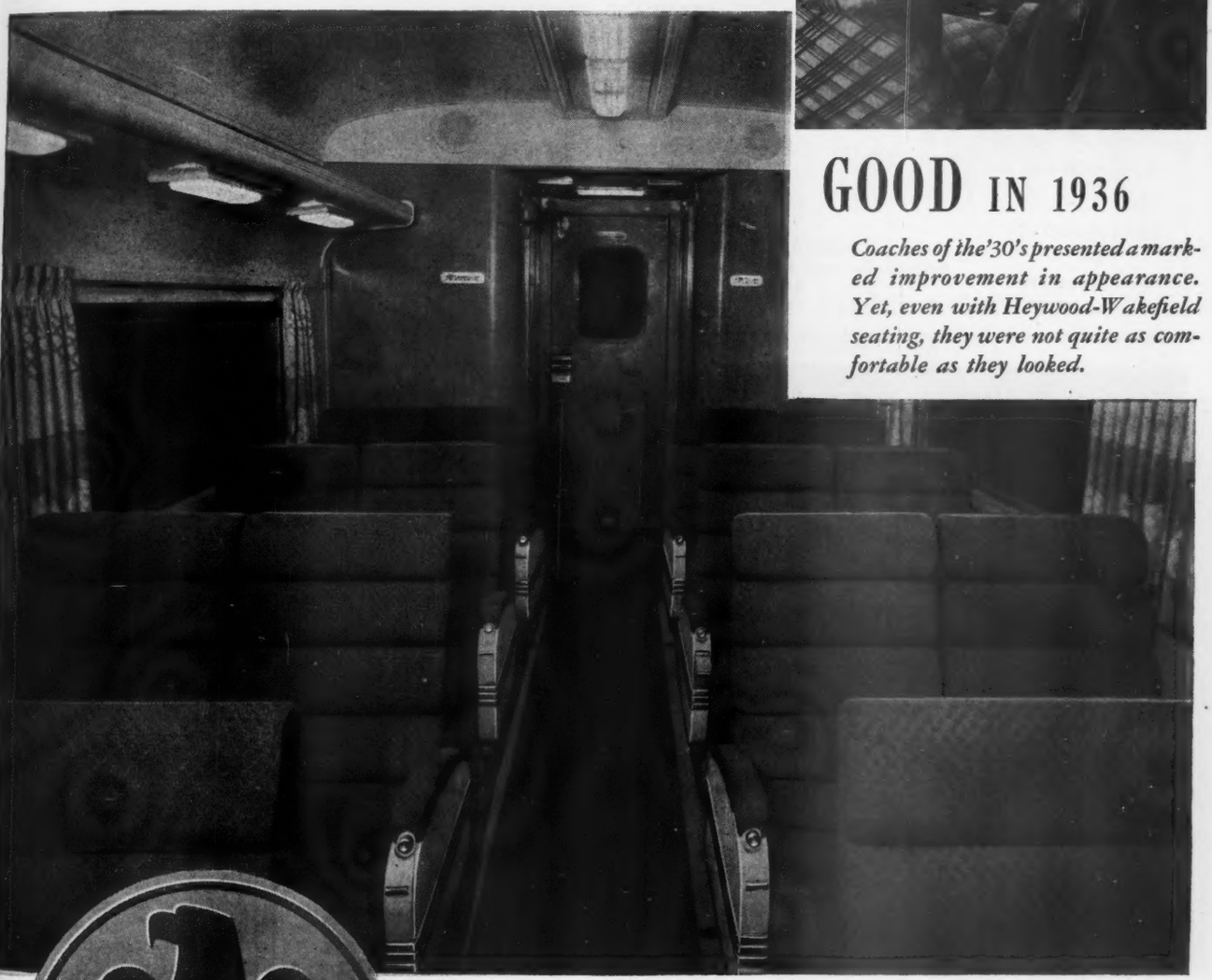
30 Church Street, New York 7, N. Y.

"Train of Tomorrow" Follows the Swing

to "Sleepy Hollow" Comfort

The "Train of Tomorrow" previews a more comfortable future for travelers. Yet the exclusive "Sleepy Hollow" design of modern Heywood-Wakefield seating is already building good will for the progressive railroads which have installed it in their new equipment.

Tailor-made alterations in outward appearance can be arranged to harmonize completely with the design and decor of your new equipment.



GOOD IN 1936

Coaches of the '30's presented a marked improvement in appearance. Yet, even with Heywood-Wakefield seating, they were not quite as comfortable as they looked.

HEYWOOD-WAKEFIELD
EST. 1826
REG. U. S. PAT. OFF

Transportation Seating Division
Gardner, Mass.

BEST TODAY

The General Motors "Train of Tomorrow" is not only revolutionary in appearance. Its Heywood-Wakefield "Sleepy Hollow" seats make it an equally notable advance in comfortable *travel.*

Get Together DEPARTMENT

RAILROAD EQUIPMENT—FOR SALE

STANDARD GAUGE LOCOMOTIVES

1—10-Ton, 0-4-0, Gasoline, Whitcomb
1—12-Ton, 0-4-0, Gasoline, Vulcan
1—18-Ton, 0-4-0, Gasoline, Plymouth
1—20-Ton, 0-4-0, Gasoline, Plymouth
1—25-Ton, 0-4-0, Gasoline, Plymouth
2— 8-Ton, 0-4-0, Diesel-Mechanical, Whitcomb
1—12-Ton, 0-4-0, Diesel-Mechanical, Plymouth
1—10-Ton, 0-4-0, Diesel-Electric, Davenport
1—30-Ton, 0-4-0, Diesel-Mechanical, Vulcan
1—35-Ton, 0-4-0, Gasoline-Electric, Porter
1—70-Ton, 0-4-4-0, Propane Electric, Plymouth
1—83-Ton, 2-6-2, Steam, Oil-Fired, Saddle Tank

ALSO 4—100-Ton, 0-4-4-0, 600 HP, Diesel-Electric, ICC Condition, 4 Traction Motors

STANDARD GAUGE CARS

5—Gondola, 50-Ton, All-Steel, 40'6", 4'7" Sides
6—Gondola, All-Steel, 50-Ton, 40'3", 2'11" Sides
3—Flat, 40-Ton, 60-Ft. S/U
4—Flat, 50-Ton, 41'6"
1—Flat, 50-Ton, 43-Ft. S/U
34—Hopper, Twin, All-Steel, 50-Ton
4—Ore Hopper, All-Steel, 50-Ton
1—End Dump, 10-Yd. All-Steel, Lift Door
9—Side Dump, 20 Yd. Automatic Air, Lift Door
1—Box, 40-Ton, 40' Single Sheathed
5—Box, 50-Ton, 50', All-Steel
3—Tank, 10,000-Gallon, Class III
14—Passenger, 64'6", All-Steel
3—Tank, 8000-Gallon, Class II & III

SEND US YOUR INQUIRIES

REPAIR PARTS For All Types of Freight Cars

IRON & STEEL PRODUCTS, INC.

GENERAL OFFICE
13486 S. Brainard Ave., Chicago 33, Illinois
Phone: BAyport 1-3456

NEW YORK OFFICE
50-c Church St., New York 7, New York
Phone: BEekman 3-8230

"ANYTHING containing IRON or STEEL"

STORAGE TANKS
6,000 Gallon
8,000 Gallon
10,000 Gallon

NEW AND USED EQUIPMENT

2—100 ton Baldwin and Alco 660 HP diesel elec. locomotives. Built 1942, condition like new.

2—35 ton Ohio locomotive cranes. Built 1943. Gasoline powered, in new condition.

MISSISSIPPI VALLEY EQUIPMENT CO.
509 Locust St.
St. Louis 1, Mo.

FOR SALE

4, AUTOMATIC AIR-OPERATED DUMP CARS

30 cubic Yard Cap., Drop Doors, Standard Gauge, 2 each Western and Magor, 70-Ton Cap. Trucks. In Good Operating and Interchange Condition.

Newhall-Marshall-Wood, INC.
30 Church Street, New York 7, N.Y.
Phone: COrtlandt 7-8090

WANTED—SNOW PLOW

HEAVY DUTY PUSHER-WEDGE TYPE

Must be in suitable condition for bucking heavy drifts.

The Apache Railway Co.
MCNARY, ARIZ.

— FOR SALE —
42 GAUGE MINE CARS
2 To 3 Ton Capacity
Used, but in sound working condition.

The David J. Joseph Co.
P. O. Box 1022 Cincinnati, Ohio
Phone — CApitol 4400

OHIO LOCOMOTIVE CRANES
GASOLINE • DIESEL
ELECTRIC • STEAM
25 TO 40 TON CAPACITY

THE OHIO LOCOMOTIVE CRANE CO.
BUCYRUS, OHIO

REPRESENTATION

WANTED
MANUFACTURERS' AGENT

Leading U. S. manufacturer of fire extinguishing equipment wants an established railway supply agent covering metropolitan New York area who can handle an additional line. (Increased use of diesel locomotives has stimulated demand for specialized big-capacity extinguishers). If you will tell us something of your experience and the lines you are currently handling, our district manager will get in touch with you promptly. Address Box 521, RAILWAY AGE, 30 Church Street, New York 7, N. Y.

Educational Services for RAILROAD MEN

Our New Service on Diesel Locomotive Operation is highly recommended for Engineers and Firemen

The Railway Educational Bureau
Omaha 2, Nebraska

POSITION WANTED

MR. RAILROAD PRESIDENT

Let me set up and supervise a business getting program for you. I can get back your old customers and also new customers. I can beat the pants off of the trucking industry. I will accept the toughest job. Am an aggressive go-getter. You can profit by interviewing me. Gifford Parker, Box 2071, Stock Yards Post Office, Chicago 9, Illinois.

Sales Engineer—wide experience and contacts Mechanical and Purchasing officials, Pacific Coast Railroads, is available direct representation or agency basis. Address Box 520, RAILWAY AGE, 30 Church Street, New York 7, N. Y.

INSPECTION SERVICE

Cross Ties, Lumber, Poles, Piles and Preservative Treatments. Analysis of Wood Preservatives. Inspectors Stationed Throughout U. S. A.

A. W. Williams Inspection Co.
Mobile, Alabama

BUY BONDS

Advertisers

IN THIS ISSUE

Have you heard about the commuter missing the boat?

After attending a dinner in New York a friend of ours arrived at the Lackawanna wharf just in time to miss a ferryboat that made connections with the last train out of Hoboken for his home town in northern New Jersey. Reconciled to trying to locate a hotel room, he dropped into a waterfront tavern for a night cap.

There he met an interesting individual who identified himself as captain of an ocean-going tug and, after learning of our friend's predicament, insisted on ferrying him across the Hudson.

Needless to say the Captain was lavish in his hospitality (principally of the Johnny Walker variety) and it wasn't until an hour later that the commuter interrupted the pleasant tete-a-tete to remark that surely they must be nearing Hoboken. That's when the Captain realized that he had neglected to disclose their plans to the mate. In the meantime, following radio instructions from a shore dispatcher, the tug was approaching Sandy Hook, many miles down the Jersey Coast, to pick up a tow. From then on the trip was all in the course of a night's work and our friend did not reach his New York office until the following afternoon. Then came the harrowing task of phoning his wife to explain his absence and the night's adventure. In fact his better half was just at the point of contacting the missing persons bureau at the local police station.

The moral of this little story is not to miss the boat, particularly with your 1950 railway advertising. Start that campaign in a big way with the use of Railway Age's famous Statistical and Outlook Number—the first issue of the new year. Closing date—December 21, 1949.

NOT ONE!

Over 160,000 of these stronger, lighter, cast-steel beams are now in use—with *not one* case on record of structural failure or maintenance due to normal wear.

One-piece construction with *integral heads* offers railroads proved economies. That's why modern A.S.F. Cast-Steel Unit Brake Beams are *first*, today, in both performance and sales.

A·S·F CAST-STEEL UNIT BRAKE BEAM

AMERICAN STEEL FOUNDRIES

MINT MARK OF FINE CAST STEEL

No other bearing with so much to offer!

1. **Rolls stay put . . . for life!** The rolls in a Timken® tapered roller bearing are permanently retained in the bearing assembly. They can't fall out and pick up dirt and grit during bearing changes. Result: less wear, longer life.

2. **Hard on the outside—tough on the inside!** Rolls and races of Timken tapered roller bearings are made of the finest steel ever developed for railroad roller bearings—our own Timken fine alloy steel. It is case-carburized to give a hard, wear resistant surface, combined with a tough inner core to withstand shock.

3. **Simplicity itself!** A bearing which in itself takes *both* radial and thrust loads! No special thrust blocks or bearings to bother about.

4. **Rolls are "made for each other".** Rolls are uniformly sized for their particular cup and cone. Bearings last longer because each roll carries its full share of the load.

5. **No roll skidding or skewing!** Wear is reduced, bearing life prolonged because the tapered rolls *can't* skid or skew. Race ribs keep the rolls in positive alignment.

6. **Rolls can't slide laterally!** Due to its tapered design there's no lateral sliding friction in a Timken bearing.

7. **No adjustments needed** when wheel and axle assembly are installed in truck. No separate thrust bearing to be shimmed up.

8. **Axle inspection simplified!** Timken bearings are pressed off with the wheel. No further work necessary before magnafluxing.

9. **Use either oil or grease!** Closures are designed to effectively retain either oil or grease.

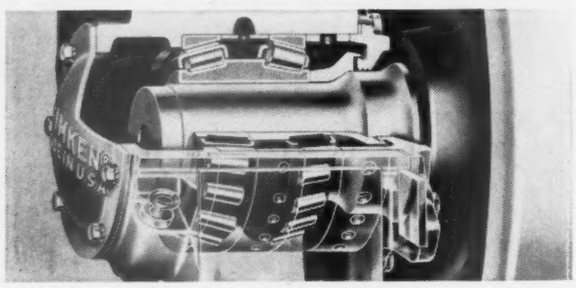
10. **Polished axle ends aren't necessary!** No separate thrust block to bear against the axle ends.

11. **Special axle length tolerances not required!** No need to pay steel extras for close tolerances.

No other bearing so fully proved!

USED ON FIRST COMPLETELY ROLLER BEARING-EQUIPPED TRANSCONTINENTAL TRAIN!

In 1927 the Milwaukee Road's *Olympian* became the first transcontinental train to be completely equipped with roller bearings . . . all of them Timken. Now Timken bearings are used on over 5000 passenger cars and 4000 steam locomotives, as well as 3900 freight cars. Let us help you with your bearing applications. Write The Timken Roller Bearing Company, Canton 6, O. Cable address: "TIMROSCO".



Timken bearing application for passenger cars

Pioneer of anti-friction bearings for railroads, Timken has remained the leader ever since. Today Timken has the largest staff of railroad bearing experts in industry: 64 men working exclusively in the railroad field on research, engineering and service problems.

TIMKEN

TRADE MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL ○ NOT JUST A ROLLER ⬭ THE TIMKEN TAPERED ROLLER ⬭ BEARING TAKES RADIAL ⬭ AND THRUST ⬭ LOADS OR ANY COMBINATION

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RAILWAY AGE

DECEMBER 17, 1949

Published weekly by Simmons-Boardman Publishing Corporation, Orange, Conn. Executive Offices, 30 Church Street, New York 7, N. Y. Entered as second class matter at Orange, Conn., under the act of March 3, 1879. Subscription price $6.00 for one year, U. S. and Canada. Single copies, 50 cents each. Vol. 127, No. 25.

Camera crew on location filming the electric-furnace sequence for industrial motion picture, "Alloy Steels"

"ALLOY STEELS"

Film Story of Controlled Production of Alloy and Special Steels

Bethlehem has completed a sound motion picture describing the production of alloy steels.

The film explains every phase of the process, beginning with the raw materials. It shows both electric and open-hearth furnaces in operation, as well as hot-rolling, billet preparation, heat-treatment, and cold-drawing. It deals extensively with highly-developed laboratory methods for maintaining quality on a mass-production basis.

"Alloy Steels" is intended for both technical and general audiences. It takes 45 minutes to show, and is available in either 16 or 35 mm. It is especially suitable for showing before such groups as:

Manufacturing and Industrial Companies
Jobbers and Dealers
Civic and Service Clubs
Colleges and Technical Schools
Technical Societies and Trade Associations

There is no charge for the use of *"Alloy Steels"* other than return shipping cost. Requests should be made at least three weeks prior to date needed. Address your requests to:

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by
Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation

★ BETHLEHEM STEEL ★

Alco GE

HAULS 30% MORE

Alco GE

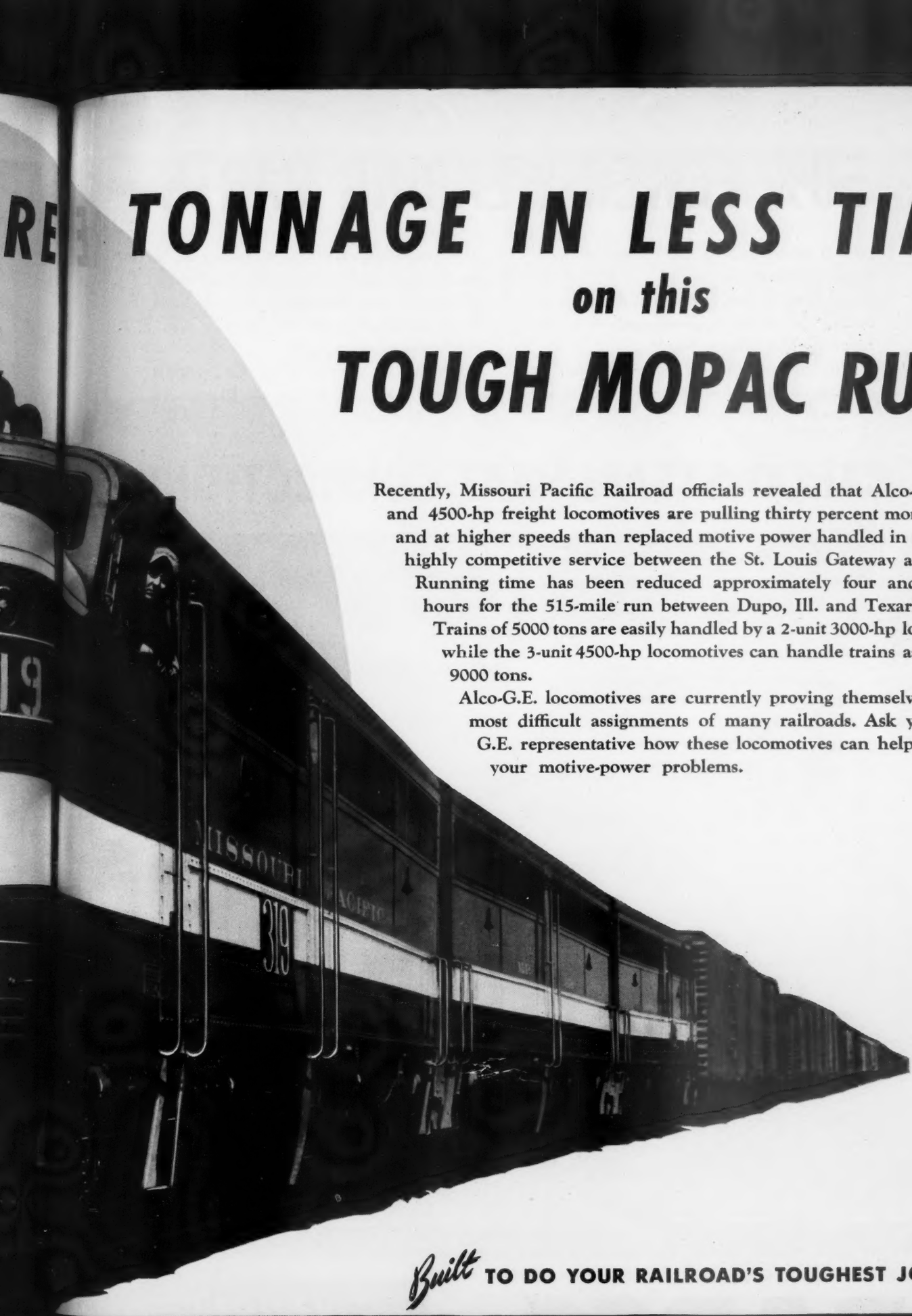
AMERICAN LOCOMOTIVE a

TONNAGE IN LESS TIME
on this
TOUGH MOPAC RUN!

Recently, Missouri Pacific Railroad officials revealed that Alco-G.E. 3000 and 4500-hp freight locomotives are pulling thirty percent more tonnage and at higher speeds than replaced motive power handled in the tough, highly competitive service between the St. Louis Gateway and Texas. Running time has been reduced approximately four and one-half hours for the 515-mile run between Dupo, Ill. and Texarkana.

Trains of 5000 tons are easily handled by a 2-unit 3000-hp locomotive, while the 3-unit 4500-hp locomotives can handle trains as heavy as 9000 tons.

Alco-G.E. locomotives are currently proving themselves on the most difficult assignments of many railroads. Ask your Alco-G.E. representative how these locomotives can help you solve your motive-power problems.



Built TO DO YOUR RAILROAD'S TOUGHEST JOBS

Alco GE MLW GE

VE and GENERAL ELECTRIC

113-237

50% FEWER WEARING PARTS

Only 2 joints, gaskets and springs per connection instead of 4.

Lightweight steel welded construction, reducing the weight approximately 30% and requiring less labor to handle.

This construction also reduces the number of parts necessary for the men to handle and for the store department to carry in stock.

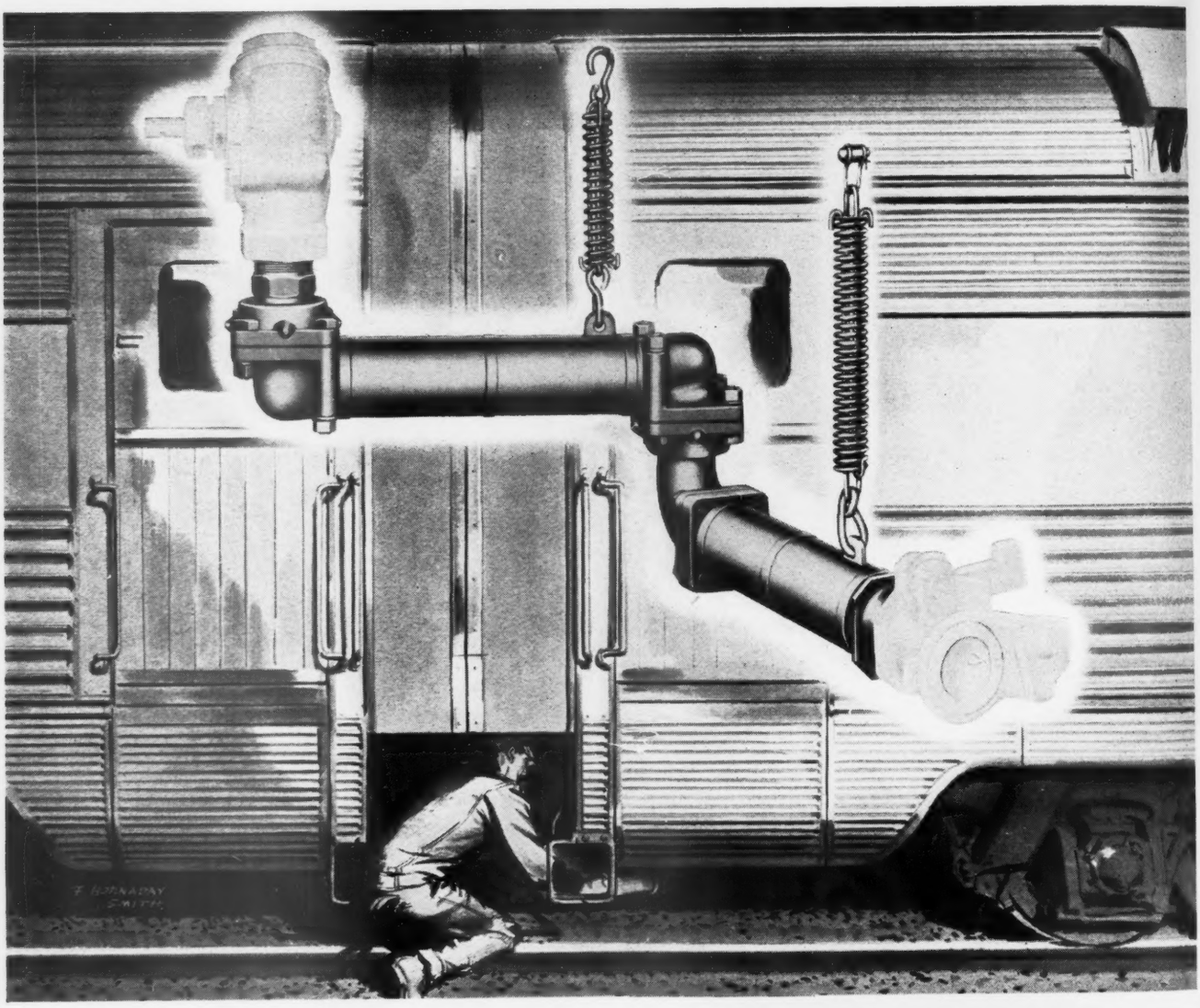
Pressure-sealed, hard, long-wearing gaskets eliminate the possibility of sudden failure.

Hardened steel chromium plated balls provide movement in all directions.

Maximum steam capacity.

Write Barco Manufacturing Co., 1805B Winnemac Avenue, Chicago 40, Illinois. In Canada: The Holden Co., Ltd., Montreal, Can.

BARCO STEAM HEAT CONNECTIONS



BARCO ··

STEAM HEAT CONNECTIONS FOR PASSENGER CARS, DIESEL, STEAM AND ELECTRIC LOCOMOTIVES

FREE ENTERPRISE—THE CORNERSTONE OF AMERICAN PROSPERITY

No "SQUATTERS" Allowed

INSIDE YOUR DIESEL CRANKCASE!

NEWEST GARGOYLE OILS

keep incomplete combustion particles and oxidation products on the move...bearings and oil passageways free of sludge.

★ ★

For CONTINUOUS POWER—Rely on the BEST!

Here's a spot inside Railroad Diesels where you're likely to have unwelcome settlers. That oil shown draining down from the cylinders brings with it contaminating materials that tend to settle on the crankcase surfaces and oil passageways. Socony-Vacuum has licked this problem. The latest Gargoyle Oils for Railroad Diesels are designed to keep these materials dispersed, so they can't collect on vital parts or clog passageways. Your crankcase—as well as your cylinder walls and pistons—*stays clean.*

SOCONY-VACUUM | GARGOYLE Railroad Lubricants

SOCONY-VACUUM OIL COMPANY, INC.
and Affiliates: MAGNOLIA PETROLEUM CO.
GENERAL PETROLEUM CORPORATION

Rely on **SOCONY-VACUUM**
Correct Lubrication

Mining Gold

FOR THE RAILROADS

When Pullman-Standard Power Tra Cribbers start digging . . .

—cribs come clean in seconds . . .

—and track-maintenance costs take a nose dive.

Suppose *we* dig into just one of numerous case histories, and let the results recently reported by a leading railroad system tell their own story . . . of "gold-mining" performance by Pullman-Standard *Power Track Cribbers.*

DATA FILE "X"

CRIBBING WITH POWER TRACK CRIBBER

Type of ballast: hard, cemented rock.
Single-track operation.
Total cribs cleared: 10,108.
Cribs per minute: 1.8.
Time per crib: 32.8 seconds.
Labor cost per crib: 13.8¢.
Labor cost per mile: $430.00.

COMPARISON WITH HAND CRIBBING (estimated)

Labor cost per crib: 61.5¢.
Labor cost per mile: $2,000.00.

SAVING—MACHINE vs. HAND CRIBBING

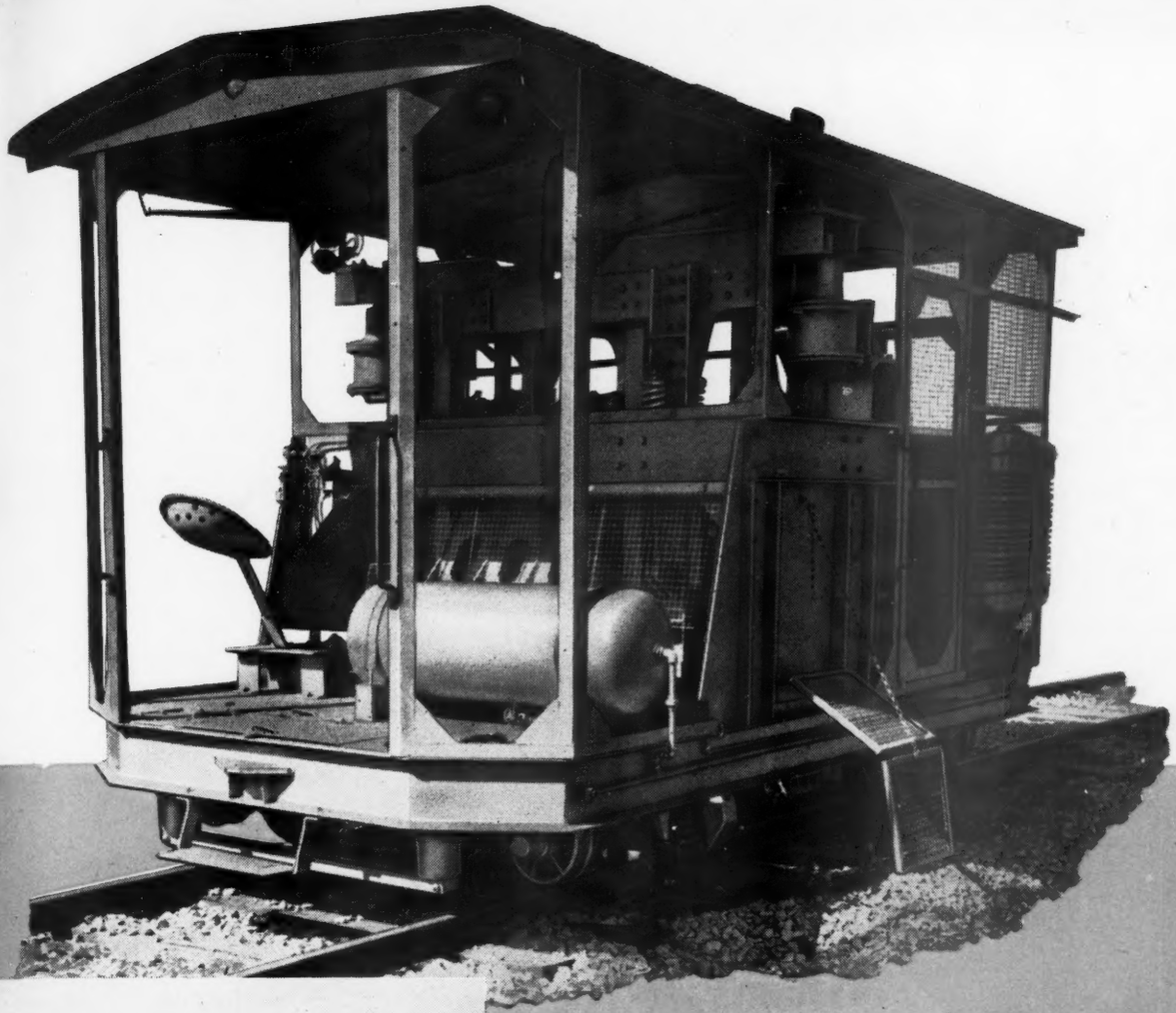
In labor cost per mile: $1,570.00 (78%).

You'll want this fact-filled brochure

"Track at Its Level Best" clearly explains the construction and operation of the Pullman-Standard Power Track Cribber, Ballast Cleaner, and Power Ballaster (tamper). 24 pages: profusely illustrated; data-file size. Let us send you a copy.

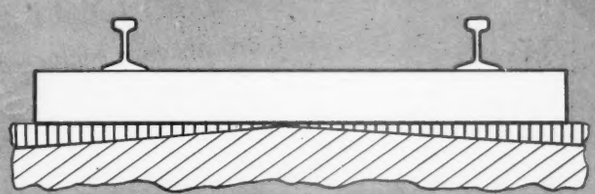
Mechanized track maintenance with Pullman-Standard equipment offers *proved economies*, to set against increased wages and the 40-hour week. The Pullman-Standard Power Track Cribber *alone* can effect great savings—and its teammates, the Ballast Cleaner and the Ballaster, may be used with it, in production-line sequence, to save additional costly man-hours.

These economies are *facts of record*, in instance after instance. They are worthy of the most careful consideration in any railroad's current budget planning. Further information will be gladly supplied.



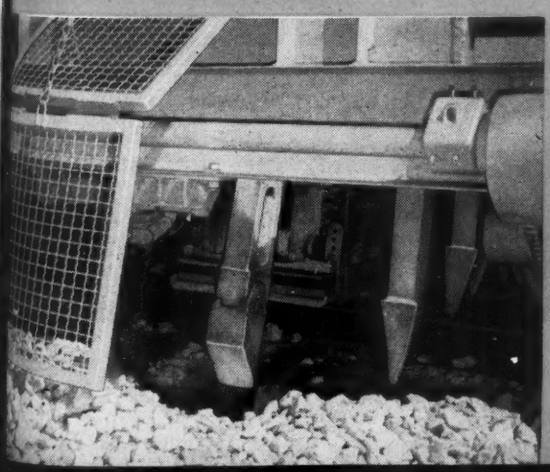
Powered by a 100-h.p. gasoline or Diesel engine, the Pullman-Standard Power Track Cribber travels to and from location at a speed of 25 miles per hour. Power-operated jacks and transverse wheels permit complete setoff in from three to five minutes.

Railroads operating Pullman-Standard Power Track Cribbers think in terms of *mileage* instead of footage. Typical performance—1.8 cribs per minute.



To restore proper drainage, the Power Cribber cuts a uniform profile, level with the tie base at the center and sloping to 3½ inches below the tie ends.

Double action! While digger bars are clearing out one crib, the "pile-driver" impact bars shown at right are loosening the ballast in the crib ahead.



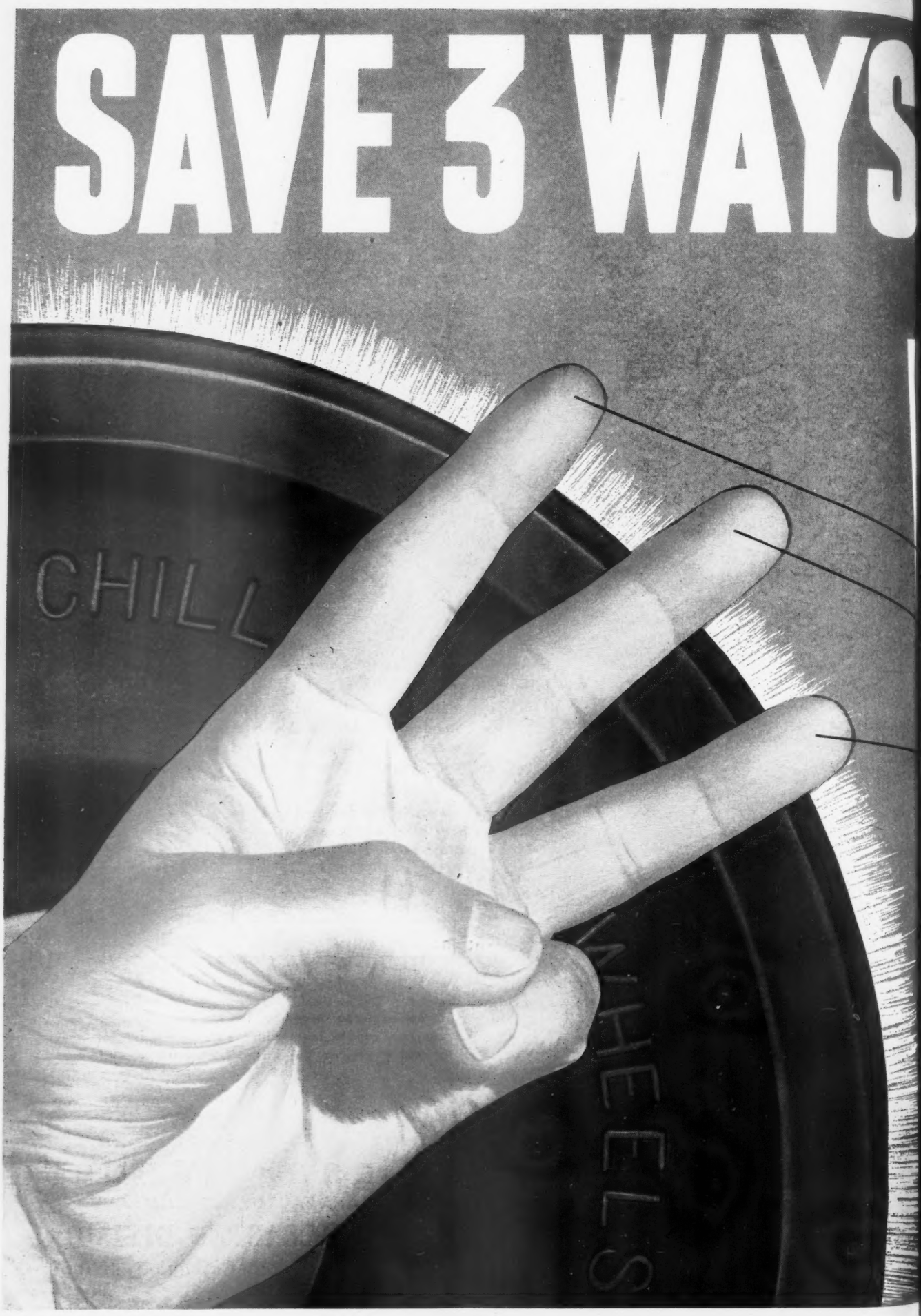
Pullman-Standard

CAR MANUFACTURING COMPANY

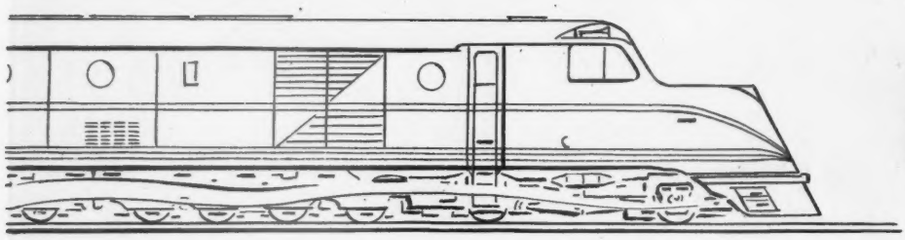
POWER BALLASTER DIVISION

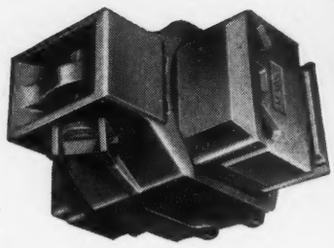
79 East Adams Street, Chicago 3, Illinois

BIRMINGHAM 3, 1004 First National Building • CLEVELAND 15, 907 Midland Building
PITTSBURGH 19, 1115 Gulf Building • NEW YORK 17, 52 Vanderbilt Avenue
WASHINGTON 6, D. C., 1025 Connecticut Avenue, N.W.
SAN FRANCISCO SALES REPRESENTATIVE: MARK NOBLE

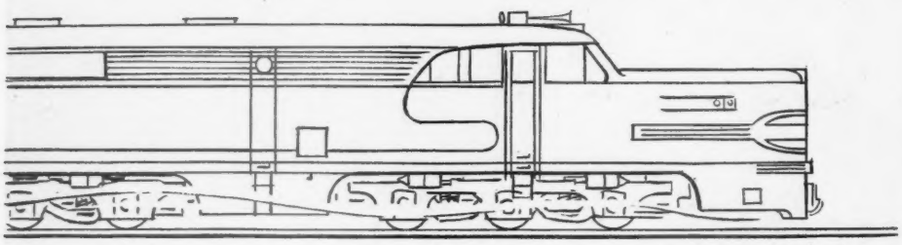

SAVE 3 WAYS
CHILL
WHEELS

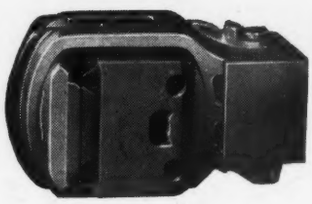
PROTECT EQUIPMENT A



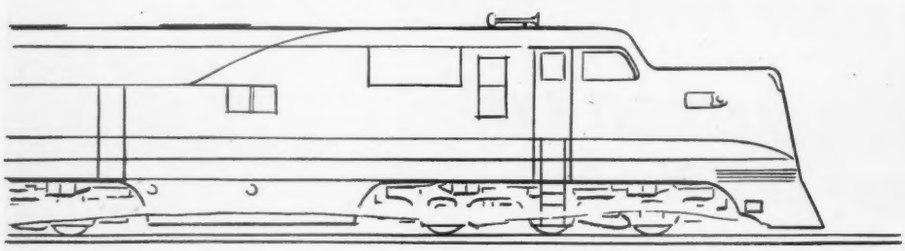


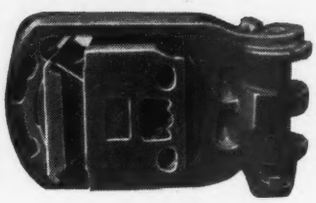
Type M-385 for extremely heavy diesel and electric freight locomotives.



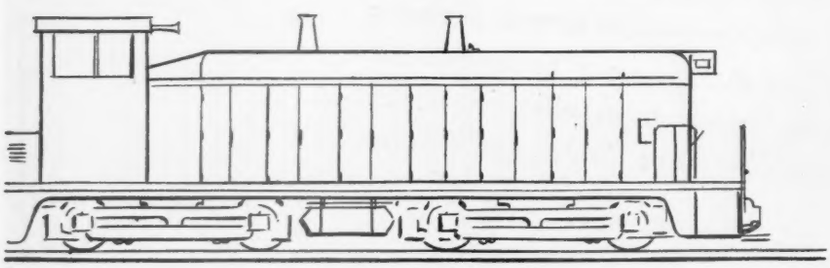


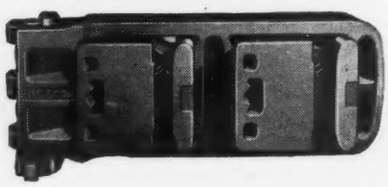
Type M-380 for heavy diesel passenger locomotives and diesel and electric freight locomotives.





Type M-350-A for diesel passenger locomotives.





Type M-375 for diesel switching locomotives.

NATIONAL MALLEABLE AND

TRUCKS • COUPLERS • YOKES • DRAFT GEARS

AND LADING

with NATIONAL Rubber-Cushioned Draft Gears

NATIONAL Rubber-Cushioned Draft Gears enable you to take advantage of the power of modern diesel and electric locomotives. That's because of:

No tendency to creep under sustained tractive force, yet continuously responsive during starting, stopping and running.

Soft acting under slowly applied loads with great reserve of cushioning capacity under shock or impact.

Low maintenance costs result from the effective over-all design and long-life construction of NATIONAL Rubber-Cushioned Draft Gears. They are recognized for their important advantages in operation and maintenance. For your diesel and electric locomotives, specify NATIONAL Rubber-Cushioned Draft Gears.

NATIONAL MALLEABLE AND STEEL CASTINGS COMPANY
Cleveland 6, Ohio

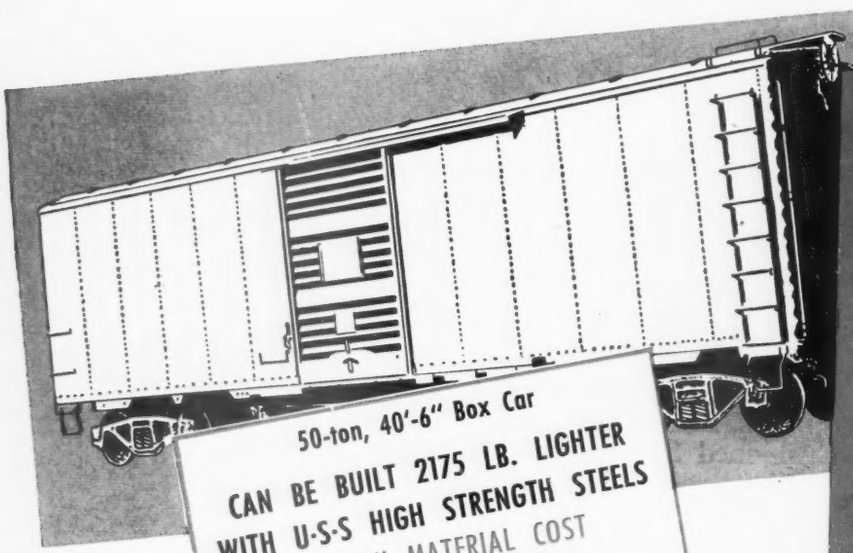
STEEL CASTINGS CO.

• JOURNAL BOXES

NATIONAL Products FOR TRANSPORTATION AND INDUSTRY

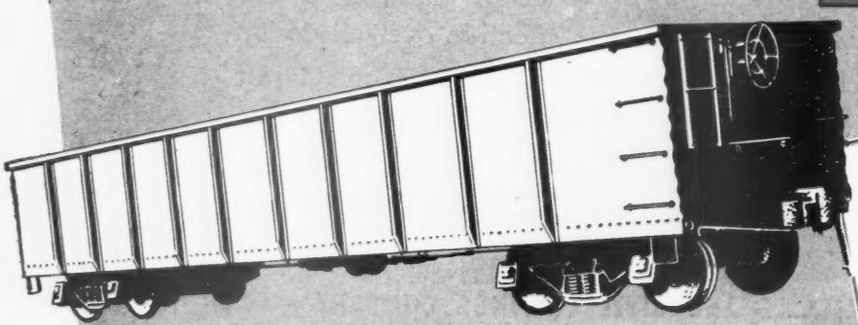
M&S Est. 1868

NOW- better, lighter, co "economy-engineered" to

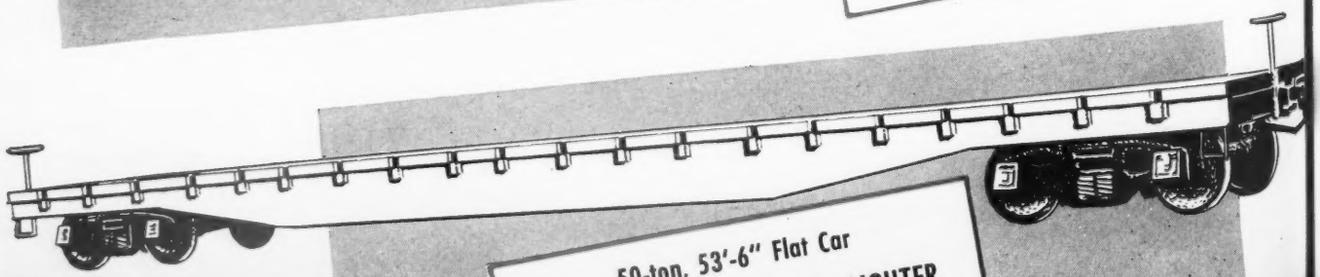


50-ton, 40'-6" Box Car
CAN BE BUILT 2175 LB. LIGHTER
WITH U-S-S HIGH STRENGTH STEELS
AT LOW MATERIAL COST
(cost only $13.12 more for materials than standard AAR car.)

good news for car buyers



70-ton, 52'-6" Gondola
CAN BE BUILT 3786 LB. LIGHTER
WITH U-S-S HIGH STRENGTH STEELS
AT LOW MATERIAL COST
(costs only $10.06 more for materials.)



50-ton, 53'-6" Flat Car
CAN BE BUILT 3161 LB. LIGHTER
WITH U-S-S HIGH STRENGTH STEELS
AT LOWER MATERIAL COST
(actually cost $32.69 less for materials.)

cost-cutting freight cars to reduce car building costs!

Here's a way to reduce your costs all along the line.

"Economy-engineered" construction with U·S·S HIGH STRENGTH STEELS keeps car building costs down, reduces weight to reduce operating costs, increases durability to reduce maintenance costs.

UNDER present conditions, railroad management has justifiably become extremely cost conscious. For that reason we believe that railroads and car builders will be interested in a thoroughly practical means of reducing car building costs. Especially so when such cost reduction *does not* decrease life expectancy, insures reduced maintenance costs and in addition provides the proved operating advantages of lightweight construction.

These highly desirable results have been obtained by the engineers of our Railroad Research Bureau who have developed new, more economical methods of applying U·S·S HIGH STRENGTH STEELS in freight car construction. To reduce material costs, each of these steels is used where its specific properties will do the most good, yet at the same time, ample section thicknesses are maintained throughout so that high resistance to destructive forces is assured.

This economy-engineered construction has three advantages, all of which will save you money, namely: (1) It trims off hundreds of pounds of dead weight, which will reduce your operating costs. (2) It ensures high strength and durability in the car structure which pays off in materially reduced maintenance, the cost of which is constantly rising. (3) It lowers construction costs so that these more efficient, money-saving cars *often cost less* than conventional, heavy equipment.

• • •

If you want *more* and *better* cars for your money—cars that keep initial costs low and cost less to operate and less to maintain than heavy, conventional equipment—contact our nearest district office. Our engineers will be glad to make suggestions on your particular problems.

•

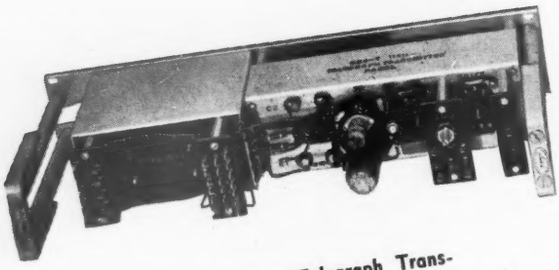
AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES: CLEVELAND, OHIO · CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH & CHICAGO
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST · UNITED STATES STEEL EXPORT COMPANY, NEW YORK

9-1682

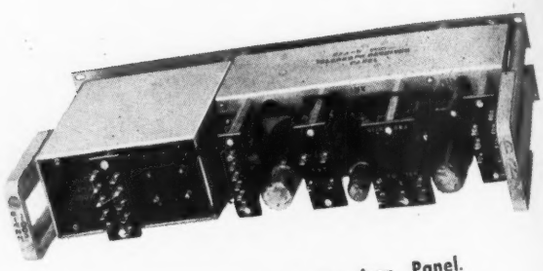
U·S·S HIGH STRENGTH STEELS

U·S·S COR-TEN · U·S·S MAN-TEN · U·S·S MAYARI-MOLY-COPPER

UNITED STATES STEEL



22A-T Lenkurt Telegraph Transmitter Panel. Multi-section filter is shown in case at left.



22A-R Lenkurt Receiver Panel. Note wiring is easily accessible from the front.

Here is MULTIPLE CHANNEL free from

The Lenkurt Type 22 Telegraph system provides innumerable combinations, six of which are listed below. One or two channels can be initially installed, and extra channels added as required up to a total of 18 on a standard carrier telephone circuit.

The carrier shift (f-m) type of transmission as used in the Type 22 produces channels remarkably immune to interference.

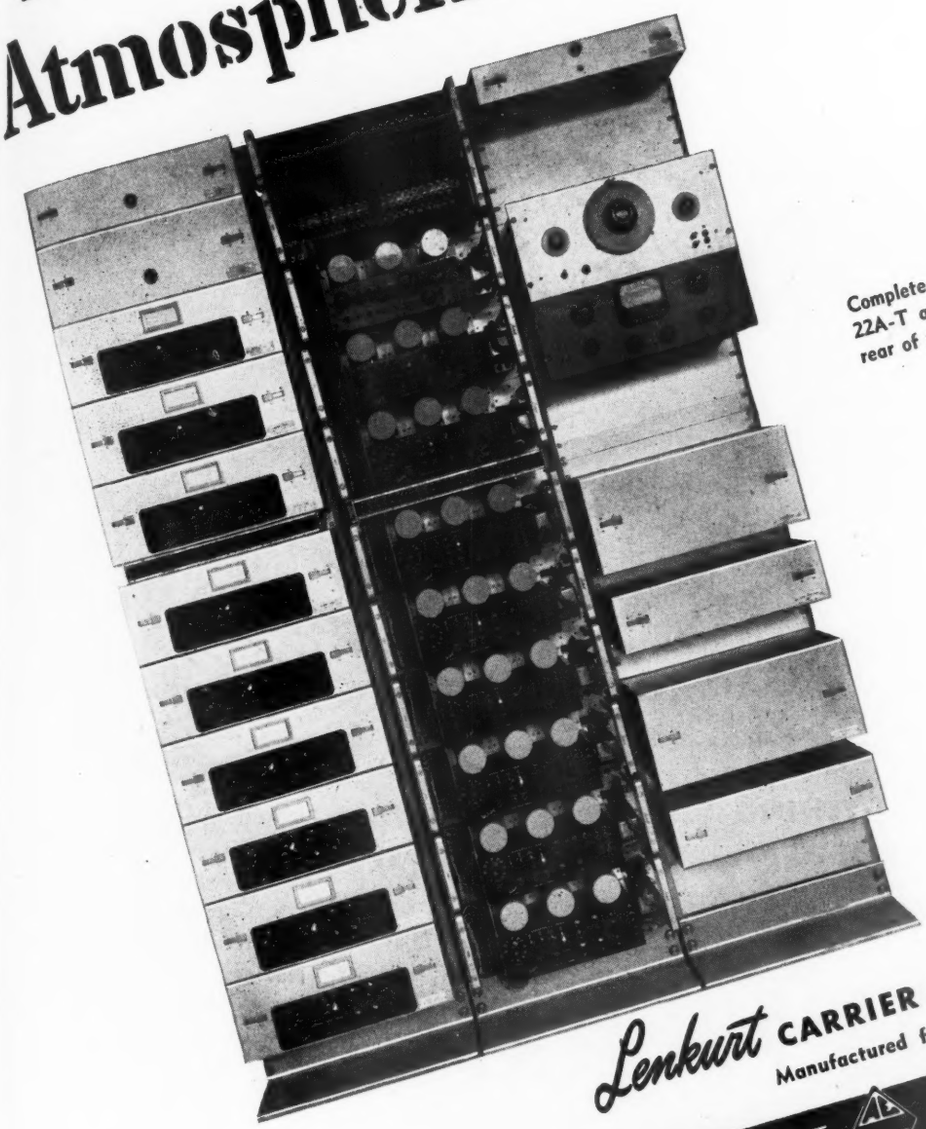
Lenkurt Type 22 channels can also be operated over a "half-channel" arrangement on conventional 3-channel telephone systems to provide up to 9 duplex channels. Almost all conventional half-duplex or full-duplex combinations of loop operation can be accommodated by the relay panels provided.

Panel assemblies are neatly enclosed in dustproof covers and mount on standard 19" racks.

SIX TYPE 22 SYSTEM POSSIBILITIES

WORDS PER MINUTE	MAXIMUM NO. TELEG. CHANNELS	CHANNEL SPACING, CPS.	VOICE CHANNEL BANDWIDTH, CPS.	LENKURT CODE NO.
60	18	120	360-2520	22A
75	14	170	340-2720	22B
120	9	240	420-2580	22A-WB
150	6	340	425-2465	22B-WB
75	2	Speech Plus	1620,1740	22C-1
75	2	Speech Plus	2635,2805	22C-2

FM Telegraph Transmission Atmospheric Interference



Complete 18 channel terminal. 22A-T and 22A-R units mount on rear of rack; relay panels on front.

Lenkurt CARRIER EQUIPMENT

Manufactured for

AUTOMATIC ELECTRIC

Makers of Telephone, Signaling and Communication Apparatus . . Electrical Engineers, Designers and Consultants

Distributors in U. S. and Possessions: Automatic Electric Sales Corporation

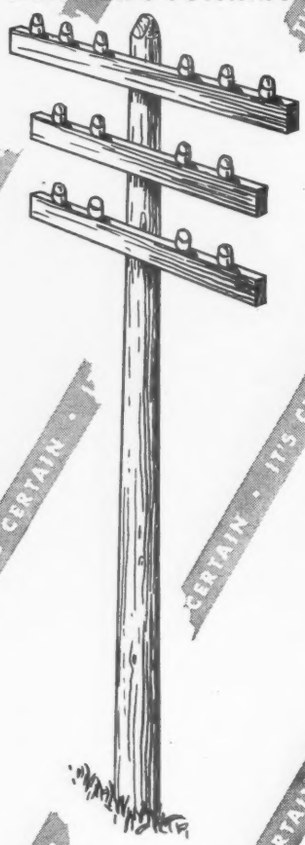
Export Distributors: International Automatic Electric Corporation

1033 West Van Buren Street, Chicago 7, U. S. A.

1. CLEAN
2. CERTAIN

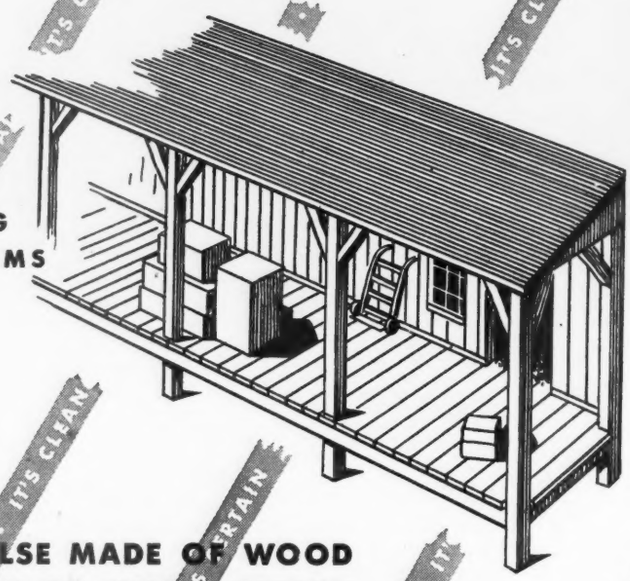
PROTECTION OF

POWER LINE POLES AND CROSSARMS



RAILROAD TIES

LOADING PLATFORMS



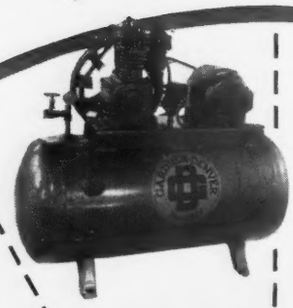
OR ANYTHING ELSE MADE OF WOOD SUBJECT TO DECAY OR INSECT ATTACK

WHEN YOU WANT *CERTAIN* PROTECTION, *CLEAN* WOOD, INSIST ON TREATMENT WITH

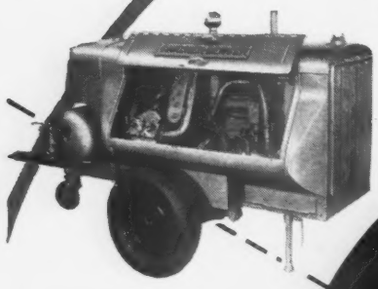
PENTA PRESERVATIVE

TRADE **CHAPMAN** MARK

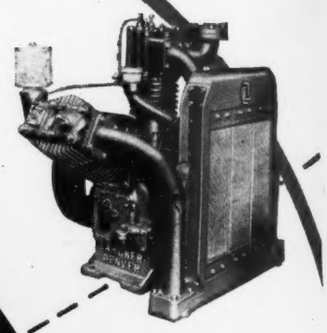
CHAPMAN CHEMICAL COMPANY ★ 761 Dermon Building, Memphis 3, Tennessee



Quality Construction In a Small Compressor . . . Gardner-Denver Air-Cooled, Tank-Mounted Compressor Outfit.



Air Power Where You Need It — When You Need It . . . Gardner-Denver WH-105 Portable Compressor.

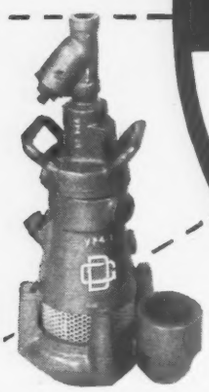


Compact — Smooth-Running . . . Gardner-Denver WX Air-Cooled Compressor.

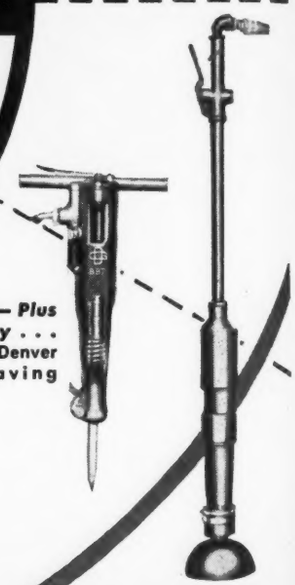
choose GARDNER-DENVER *Quality*

and help your crews do more work – faster

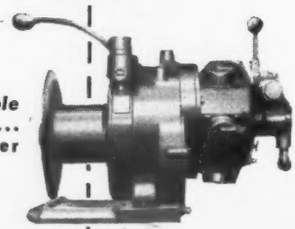
When you have to do the same job with fewer man-hours, it's a relief to know the tools your workmen use will help speed the work — will stay on the job till it's done. That's the assurance you have when you insist on Gardner-Denver *quality-built* compressors and air tools. Write us now for complete information.



Efficient and Dependable Pumping . . . Gardner-Denver VP4 Pneumatic Sump Pump.



Power — Plus Safety . . . Gardner-Denver B87 Paving Breaker.



Smooth, Flexible Hoisting Power . . . Gardner-Denver HB Air Hoist.

Easy digging . . . Gardner-Denver Model 28 Clay Digger.

Positive Protection . . . Gardner-Denver L012 Line Oiler.

Rugged — and Easy to Hold . . . Gardner-Denver T23 Backfill Tamper.

GARDNER-DENVER Since 1859

Gardner-Denver Company, Quincy, Illinois

In Canada: Gardner-Denver Company (Canada) Ltd., Toronto, Canada

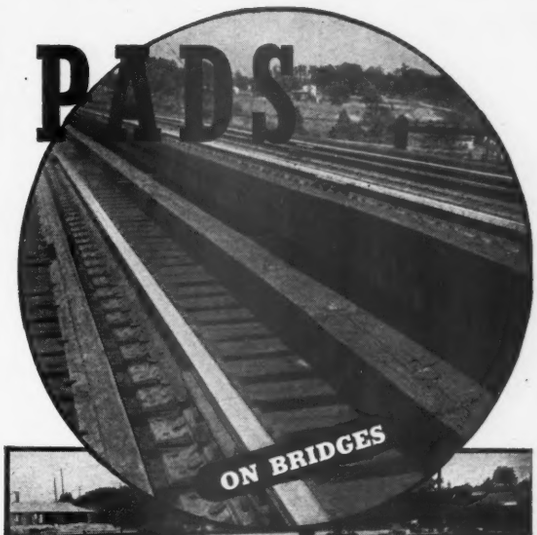
FABCO TIE PADS

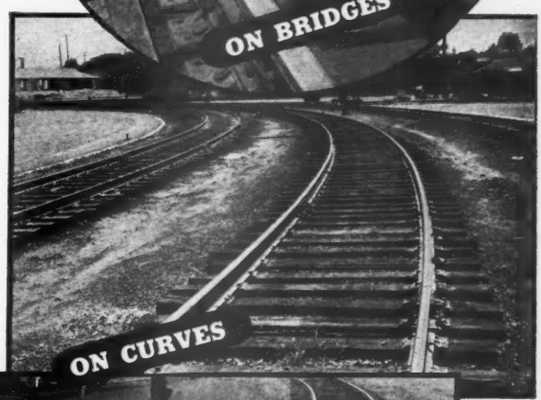
REDUCE MECHANICAL WEAR OF TIES

By reducing the plate cutting of ties Fabco Tie Pads save you money in two ways. (1) They extend tie life. (2) They reduce to a minimum the need for regauging.

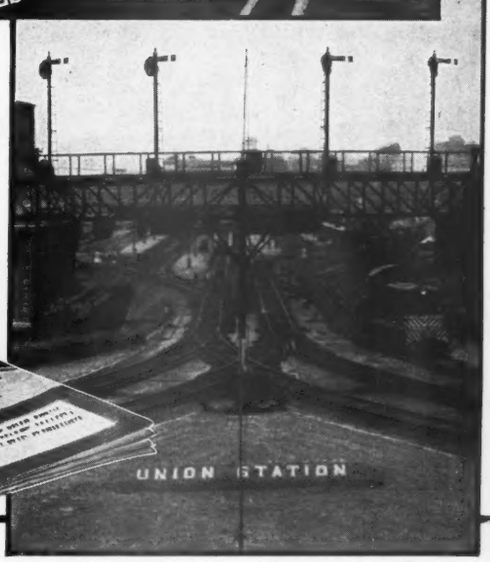
17 REASONS WHY YOU SHOULD USE FABCO TIE PADS

1. Prevent cutting of ties by plates.
2. Extend tie life.
3. Reduce labor costs by less frequent tie renewal.
4. Maintain gauge.
5. Save labor of regauging.
6. Have exceptionally long life — comparable to tie life.
7. Withstand extremes of temperature, moisture, brine, sand.
8. Have great strength under load.
9. Do not squash or crush under extremes of temperature or long service.
10. Permanent resiliency assures tight spikes.
11. Resilient winter and summer.
12. Cushion track structure from impacts.
13. Assist in maintaining line and surface.
14. Large tie plates unnecessary.
15. Compensate uneven bearing surfaces.
16. May be transferred from one location to another.
17. Low pad cost.





and **STATION APPROACHES**



Made by the Makers of Fabreeka with over 15 Years Experience in Track

FABREEKA
PRODUCTS COMPANY
INCORPORATED

222 SUMMER STREET
BOSTON 10, MASS.

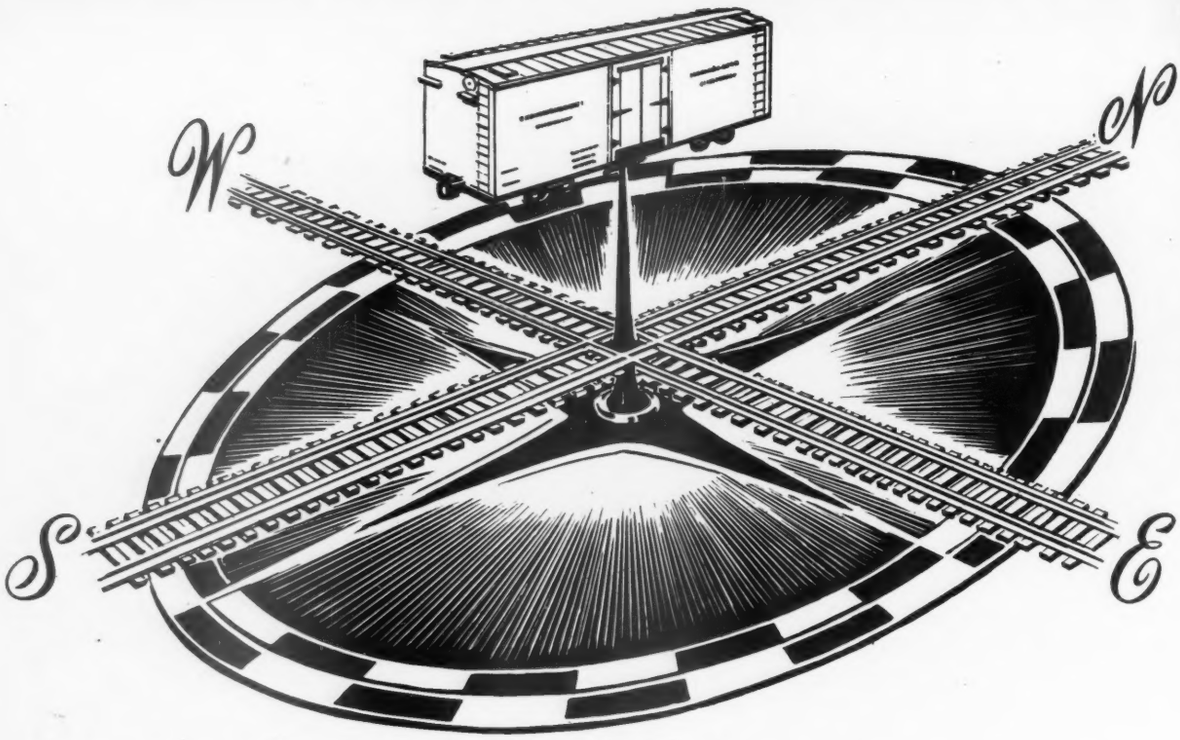
NEW YORK — PHILADELPHIA
DETROIT — SPARTANBURG
CHICAGO — OAKLAND

Please send me latest Fabco Tie Pad literature.

NAME.....

FIRM.....

ADDRESS.....



Efficient under *all* conditions!

A refrigerator car insulated with STREAMLITE HAIRINSUL is efficient — this is true no matter at which point of the compass it may be located — in frigid mountains or on torrid plains... on long hauls or yard "humps".

Leading refrigerator car builders have been specifying all-hair insulation for nearly half a century — and they find today that STREAMLITE HAIRINSUL, with its 40% less weight, is the most efficient and economical.

Highlights of the major advantages gained by using STREAMLITE HAIRINSUL are given below — write for complete data.

LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.

LIGHT WEIGHT. Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

PERMANENT. Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

EASY TO INSTALL. Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

COMPLETE RANGE. STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

HIGH SALVAGE VALUE. The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

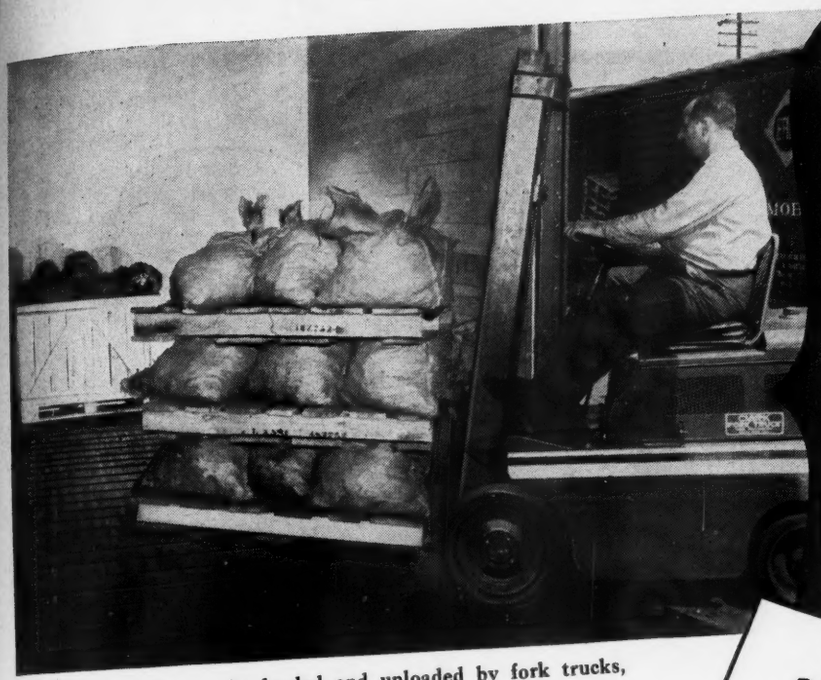
Dept. H912 Merchandise Mart Chicago 54, Ill.

Action at Cajon Pass!

FAIRBANKS-MORSE

Opposed-Piston Diesel Power

on the UNION PACIFIC



There's FREIGHT PROGRESS, TOO with palletized loading and...

NAILABLE STEEL FLOORING

NAILABLE STEEL FLOORING
A GREAT LAKES STEEL PRODUCT

"When materials can be loaded and unloaded by fork trucks, there is more freight car availability without increasing the number of freight cars. . . . car floors must be stronger to avoid breaking them when using this type of equipment."

—Report of A.A.R. Committee on Storage and Material Handling Facilities at Purchases and Stores Division Meeting, June 1949.

"The savings in manpower and money are tremendous," the A.A.R. Committee further reported. That's the reason why more and more progressive roads are turning to NAILABLE STEEL FLOORING... either specifying it in new orders or converting present rolling stock.

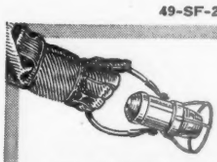
Investigate your losses in repairing or replacing broken wooden floors, in damage suits, in idling cars that can't take modern loading methods . . . and then investigate all-purpose, ever-ready NAILABLE STEEL FLOORING.

YOU SAVE 3 WAYS

In boxcars, flats, and gondolas, the long life of NAILABLE STEEL FLOORING means lower repair and replacement costs and lower operating costs. And because it holds nails tighter and won't splinter, goods are safer on NAILABLE STEEL FLOORING. It saves you money in three ways—in operations, maintenance, and damage claims.

To learn more about the utility and safety of NAILABLE STEEL FLOORS, and how to use them to your best advantage, write directly to us.

49-SF-22 PATENTS PENDING



PUT *MORE* OF YOUR REVENUE BACK WHERE IT COMES FROM... *IN FREIGHT!*

83% of the country's railroad revenue comes from freight. That's one big reason why far-sighted purchasing executives are earmarking more funds for modern flooring . . . NAILABLE STEEL FLOORING.

GREAT LAKES STEEL CORPORATION

Steel Floor Division • Penobscot Bldg. • Detroit 26, Michigan

UNIT OF NATIONAL STEEL CORPORATION

Pay Day for 1948

—By Hungerford

Watch for other railroad cartoons by Mr. Hungerford

A cut of suitable size may be obtained at cost by anyone wishing to reproduce the above cartoon.

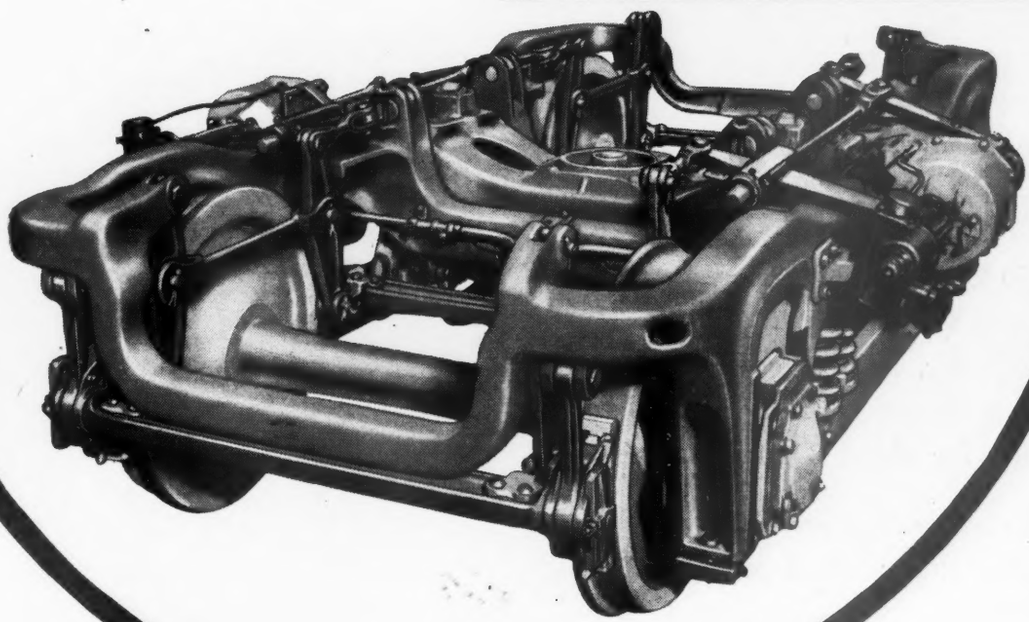
Address requests to:

Edgewater Steel Company
P. O. Box 478, Pittsburgh 30, Pennsylvania.

Gives you

SAFE SHORT SURE STOPS

Nothing Finer can be said about Brakes!



SIMPLEX

UNIT CYLINDER CLASP BRAKES

"Under Virtually Every Streamliner"

AMERICAN STEEL FOUNDRIES

MINT MARK OF FINE CAST STEEL

Modern MAGNUS BEARINGS *Improved*

"TWINPLEX" ALARM JOURNAL BEARING

Gives *"Two-Way"* ADVANCE WARNING

—of High Temperatures in Journal Box

1. a warning you can **SMELL**

2. a warning you can **SEE**

The "Twinplex" Alarm Journal Bearing is a certain safeguard against failures resulting from overheated journals.

It is a standard A. A. R. bearing equipped with two brass tubes, each having a small orifice sealed with fusible metal which melts at 350 deg. F. At this temperature, one tube releases a penetrating odor, and the other a dense white smoke, both continuing for about 8 minutes.

This device has proven highly effective under actual service conditions.

SATCO *Bearing Metal*

MODERN HEAVY DUTY BEARINGS

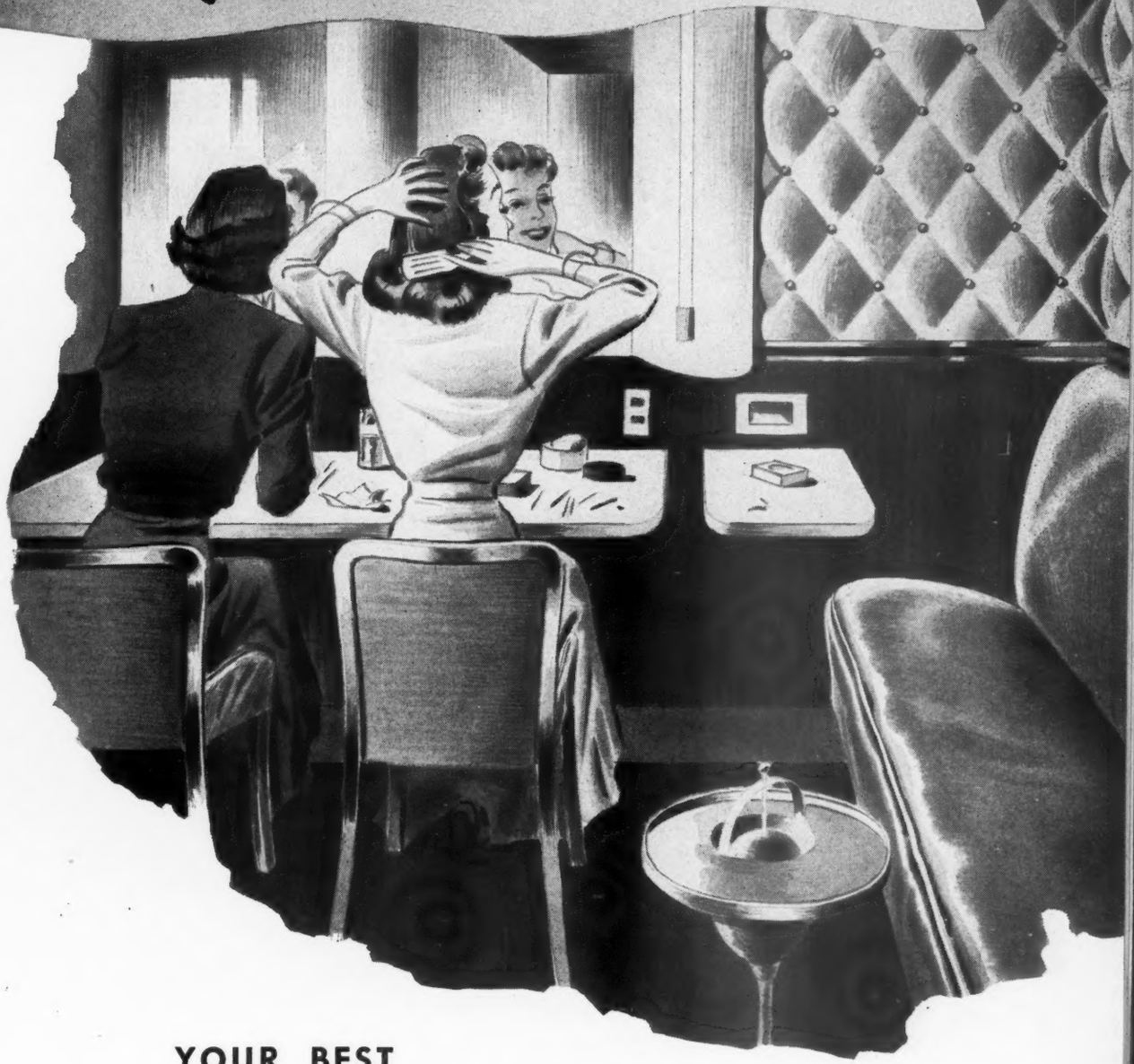
MAGNUS METAL CORPORATION

NEW YORK

CHICAGO

2180R

LUXURIOUS **TOLEX** UPHOLSTERY



YOUR BEST ADVERTISEMENT FOR MORE PASSENGERS

Beautiful, colorful, super-tough TOLEX Plastic Leathercloth for railroad car upholstery, wall covering and trim can be your best advertisement to the public. Passengers remember with pleasure its eye-appealing colors and effects . . . its freshness . . . its cool softness . . . its lush comfort. No longer need they dread the long trip with such luxurious surroundings.

And TOLEX will save you money, too, through its outstanding ability to really take it! This long-wearing material can be used right down to the floor because of its extreme resistance to scuffing and abrasion. It's water-proof . . . stain-resistant . . . easy to keep clean . . . can be made fire-resistant. Write for samples and more details. Textileather Corporation, Toledo, Ohio.

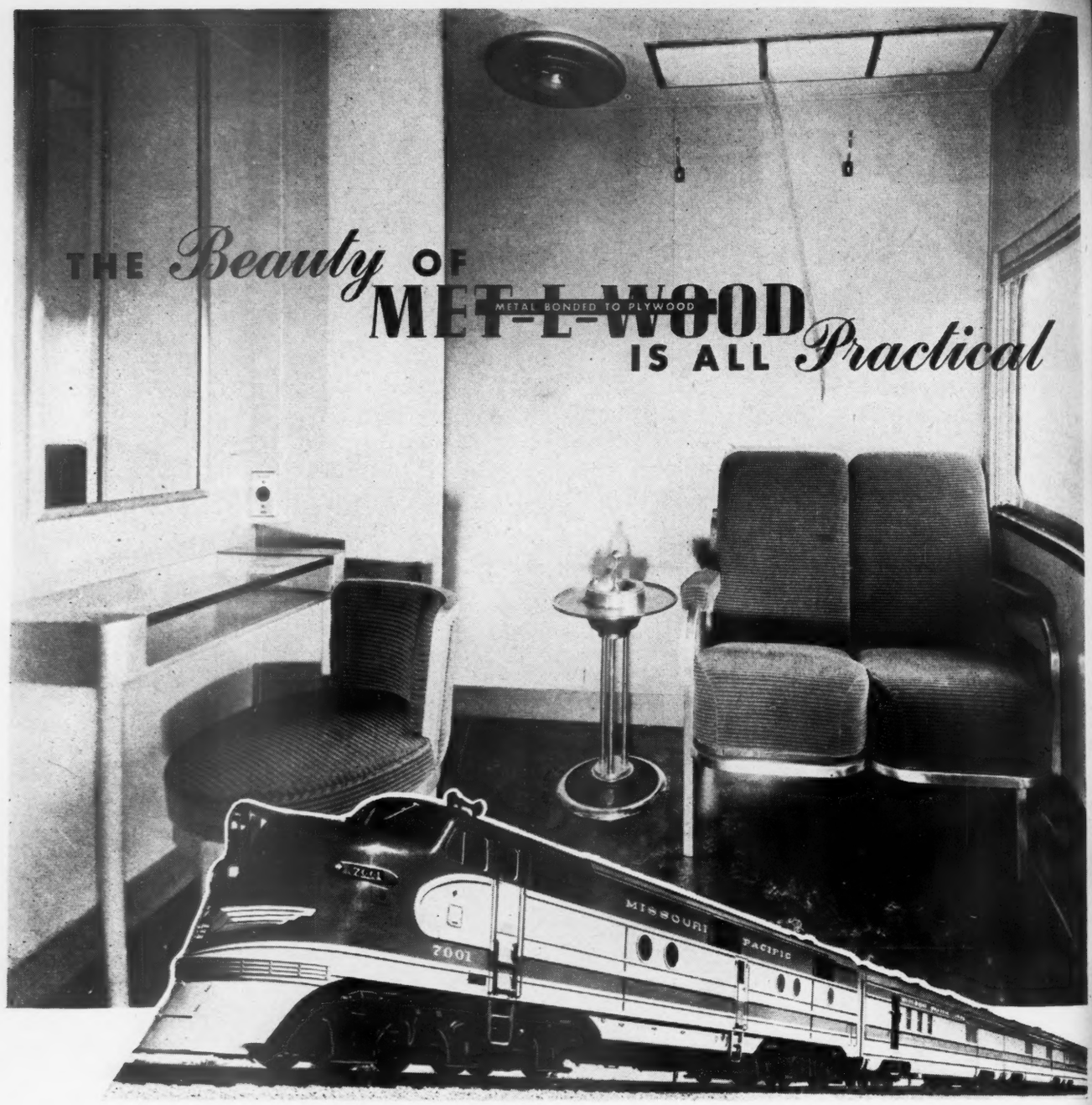
TOLEX CAN TAKE IT!*

MORE THAN 35 YEARS OF PUBLIC ACCEPTANCE

TEXTILEATHER*

NOT LEATHER

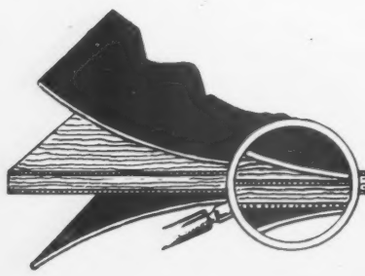
**Reg. U. S. Pat. Off.*



Contributing to the luxurious beauty and overall efficiency of the new Missouri Pacific—Texas & Pacific "Eagle" trains, the use of MET-L-WOOD for exterior sheathing and doors of the Diesels, and for panels, partitions, doors, and interior details in the cars produces multiple advantages: it reduces dead weight . . . improves appearance . . . increases longevity . . . cuts cleaning costs . . . saves maintenance . . . helps achieve a lower center of gravity.

Above: Women's powder room in one of the de luxe coaches built by A. C. F. for the new "Eagles". Doors and partitions are MET-L-WOOD.

MET-L-WOOD deadens sound . . . damps vibration . . . resists fire.

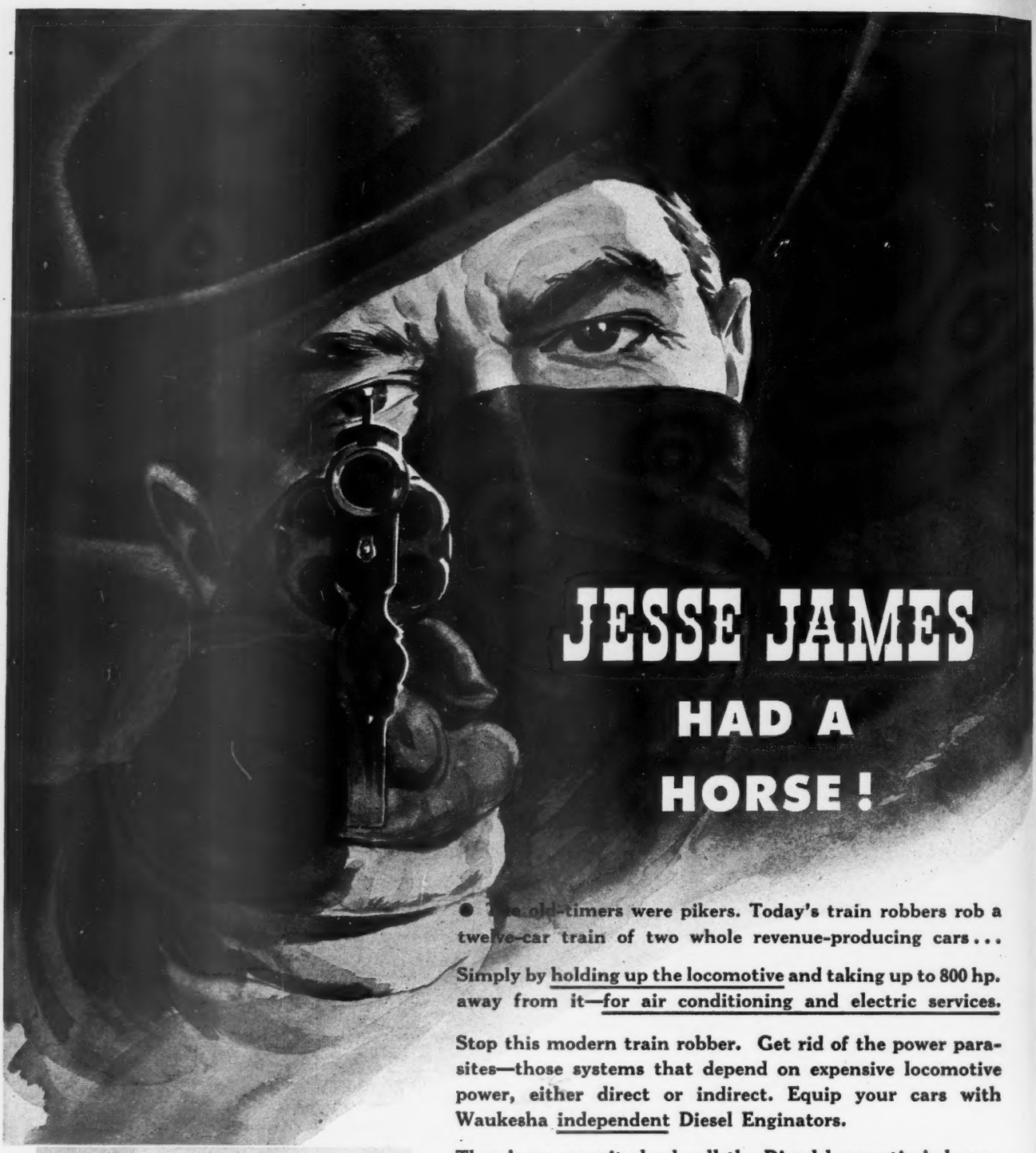


MET-L-WOOD CORPORATION

6755 West 65th Street, Chicago 38, Illinois

Holiday Siding

Season's Greetings from Standard Railway Equipment Mfg. Co.
310 North Michigan Ave., Chicago • 247 Park Ave., New York

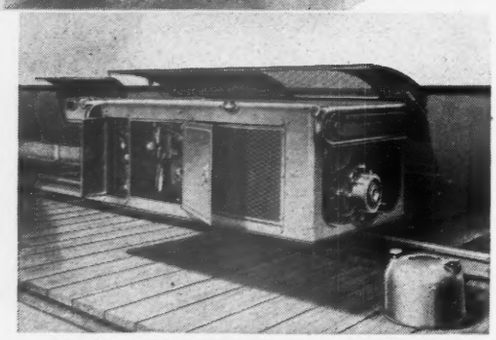


JESSE JAMES HAD A HORSE!

● The old-timers were pikers. Today's train robbers rob a twelve-car train of two whole revenue-producing cars . . .

Simply by holding up the locomotive and taking up to 800 hp. away from it—for air conditioning and electric services.

Stop this modern train robber. Get rid of the power parasites—those systems that depend on expensive locomotive power, either direct or indirect. Equip your cars with Waukesha independent Diesel Enginators.



Waukesha Diesel Enginator on tubular track extension, withdrawn for general inspection

There's no parasite load—all the Diesel locomotive's horsepower is available to pull the train. Waukesha Diesel Enginators completely take over—supply all the power needed for modern deluxe air conditioning, emergency heating and all other electric services on demand, entirely independent of locomotive, train movement, car location and standby service. And they burn the same Diesel fuel as your locomotives.

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WAUKESHA *Diesel* ENGINATORS

RAILWAY DIVISION • **WAUKESHA MOTOR COMPANY** • WAUKESHA, WISCONSIN
Largest Builders of mobile, engine-driven Refrigeration and Generator Equipment

MAXIMUM PROTECTION

FOR CARS and LADING

Cardwell and Westinghouse shock-absorbing devices protect rolling stock against excessive horizontal, vertical, lateral and angular forces. They are designed with a high factor of safety, resulting in capacities well above the requirements.

WESTINGHOUSE

Friction Draft Gear
Certified A.A.R.

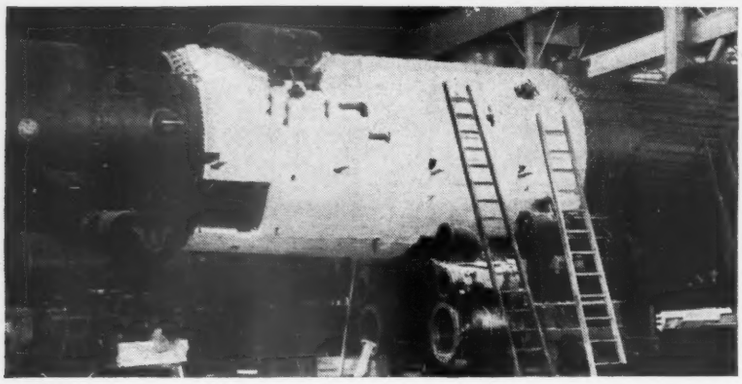
CARDWELL

Friction Bolster Springs
. . . for A. A. R. and
Long-Travel Springs.

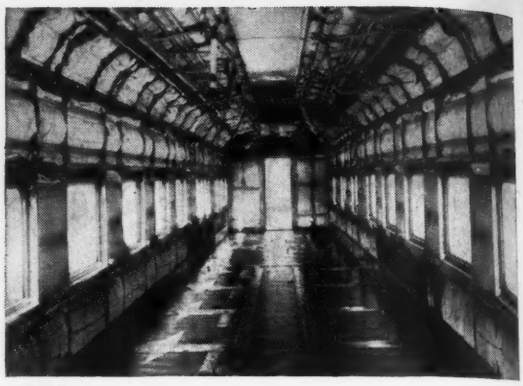
Over 98% of the cars in freight carrying service are A. A. R. construction and over 96% have Friction Draft Gears.

Cardwell Westinghouse Co., Chicago
Canadian Cardwell Co., Ltd., Montreal

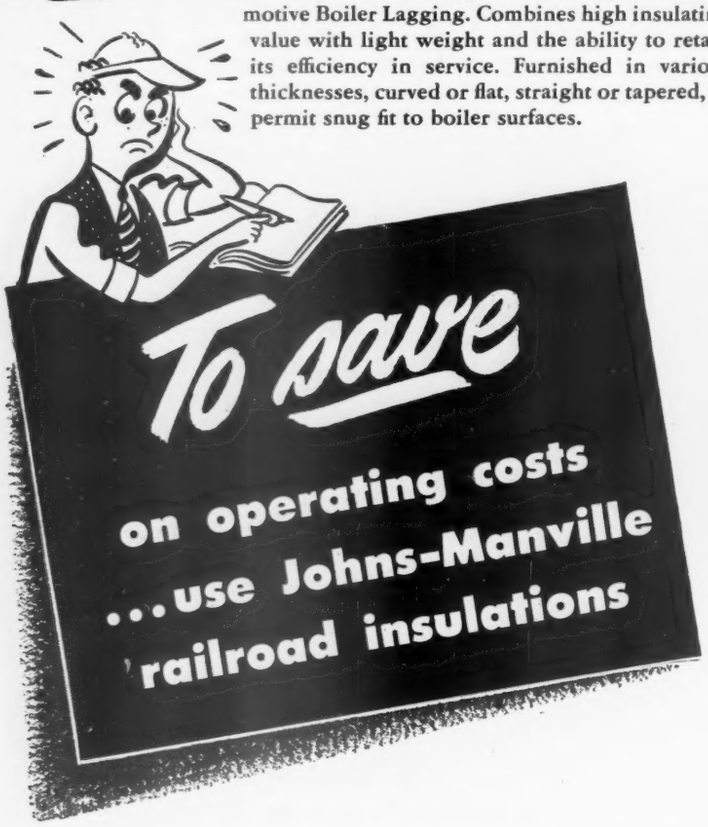
2764

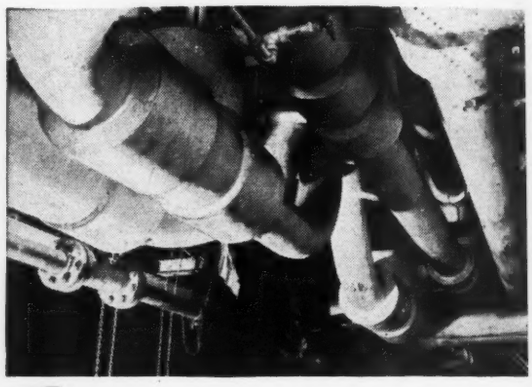


To save on locomotive operation—Use J-M 85% Magnesia Locomotive Boiler Lagging. Combines high insulating value with light weight and the ability to retain its efficiency in service. Furnished in various thicknesses, curved or flat, straight or tapered, to permit snug fit to boiler surfaces.



To save on passenger car operation—Insulate with J-M Stonefelt blankets for permanently high thermal insulation efficiency, lower air conditioning costs over the years. Stonefelt retains its rated thickness . . . won't settle with vibration. In addition, it is both fire- and moisture-resistant.

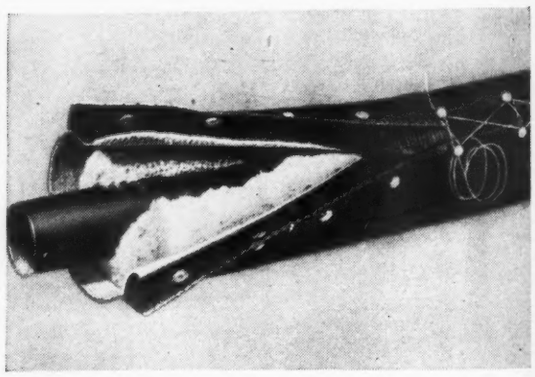




To save on power plant operation—Use 85% Magnesia, the most widely used insulation for steam lines up to 600° F. Light in weight, uniform in composition, it keeps fuel costs low, provides dependable insulation that often outlasts the installation.

...there is a type for every railroad requirement...

Johns-Manville manufactures many types of insulations for railroad use...for refrigeration cars, cold-storage rooms, tank cars, air-conditioning systems, locomotive fire-boxes, soundproofing. In addition, the completely equipped Johns-Manville Insulation Laboratories are available to help you find answers to new insulation problems. For further details, write Johns-Manville, Box 290, New York 16, N. Y.

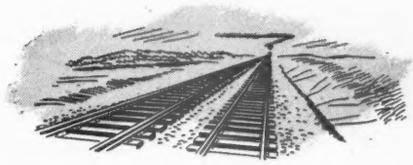


To save on train operation—Use J-M Train-Line Insulations for steam piping, and hot and cold water and air-conditioning lines. Made of materials that maintain high efficiency under severe conditions of moisture and vibration and temperatures up to 450°F.

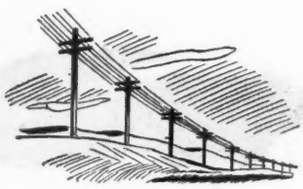
Johns-Manville

91 YEARS OF SERVICE TO TRANSPORTATION

Let's Check The Proved Facts About Wood Preservation!

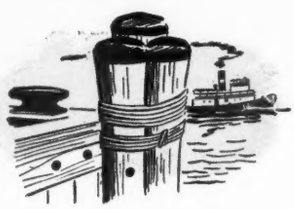


The proved *facts are simple . . . and well-established.*



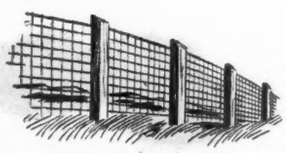
THE FIRST PROVED FACT is that Coal-tar Creosote is the only wood preservative that has proved successful for more than 100 years under practically all conditions.

THE SECOND PROVED FACT is that Coal-tar Creosote, properly applied, makes wood last 3 to 5 times longer. Its deep penetration under pressure protects wood from rot, termites, marine borers, and all other wood-destroying organisms.

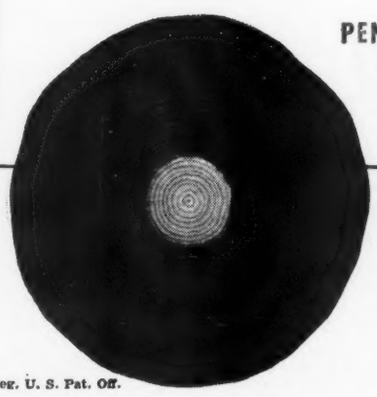


THE THIRD PROVED FACT is that Coal-tar Creosote is the most widely used, and most universally preferred, wood preservative in the world.

You can be *sure* you're safe when you hold to these proved facts. If any other method of wood preservation should ever prove better, you can be certain that Barrett will be among the first to sponsor it. Until then, follow the proved facts—protect your lumber with Barrett* Coal-tar Creosote. Our half-century of wood preserving experience is the basis for this advice.



PENETRATES TO THE HEARTWOOD . . . PRESERVES . . . PROTECTS



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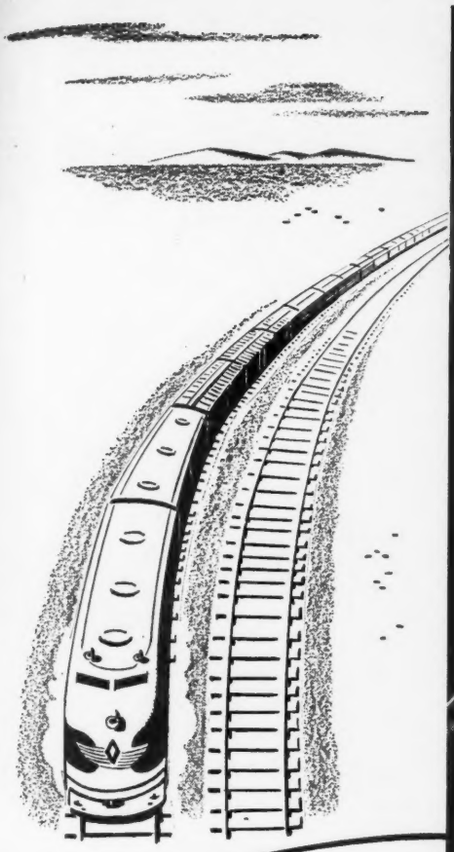

DEPENDABLE PERFORMANCE DAY AFTER DAY . . . *Actually at Lower Cost!*

● Here are two profit-producing advantages to expect when you use alloy steels for vital working parts in Diesel engines, like that shown above—or in steam locomotives:

1. DEPENDABLE PERFORMANCE. Alloy steels are exceptionally high in strength and toughness. They carry heavy loads. They withstand severe shock, strain, vibration and sudden reversal of stress. They stubbornly resist fatigue. They respond uniformly to heat treatment and produce hard, wear-resisting working surfaces. Thus, they are able to deliver the kind of performance that keeps equipment on the road day after day.

2. LOWER COST. While alloy steels may be slightly higher in first cost, they actually cost less in the long run. Useful road time of equipment is extended. Repair and replacement costs drop. The net result —LOWER END COSTS.

As the world's leader in alloy steel making, Republic is ready to help you get best results from these steels in gears, shafts, axles, bearings, valves, studs, slides and other working parts. Write us.

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"Through a Glass Darkly..."

... is a perfect description of the way Grandpa saw the scenery, as he squinted through dusty, soot-grimed panes on the trains of yesteryear.

...but it's not right at all for Grandpa's grandson!

Thanks to the progressive management of our modern railroads, traveling today has become a scenic experience. And as passengers have learned to expect a clear view of the right-of-way scenery, railroad management has learned that the best way to insure it is with ADLAKE Breather Windows.

For ADLAKE Breather Windows remain *always* sparkling clear, regardless of changes in temperature or humidity. They require no maintenance other than routine washing, and contain no dehydrants or drying compounds. What's more, when panes are broken in service, *only the glass* needs replacement! Repairs can be made right in your own shops, eliminating costly out-of-service periods.

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Manufacturers of Specialties for the Railway Industry

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...and a lot more!

There's increased emphasis these days on the *appearance* of freight equipment. Railroad men who understand the value of good public relations also understand that in many parts of the country freight cars are their chief means not only of displaying their company name . . . but of reflecting the sound, progressive management back of it.

As a result, more and more rolling stock goes forth today smartly attired . . . instantly recognized . . . in tough, durable Du Pont DULUX Railroad Finishes. And this choice of DULUX pays off . . . in unusually high initial gloss that *holds* despite smoke, fumes, cinders, hard knocks, and weathering. Pays off in a wide range of lasting colors that mean less frequent repainting. Pays off in the approving glances of *millions* of interested eyes! E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Delaware.

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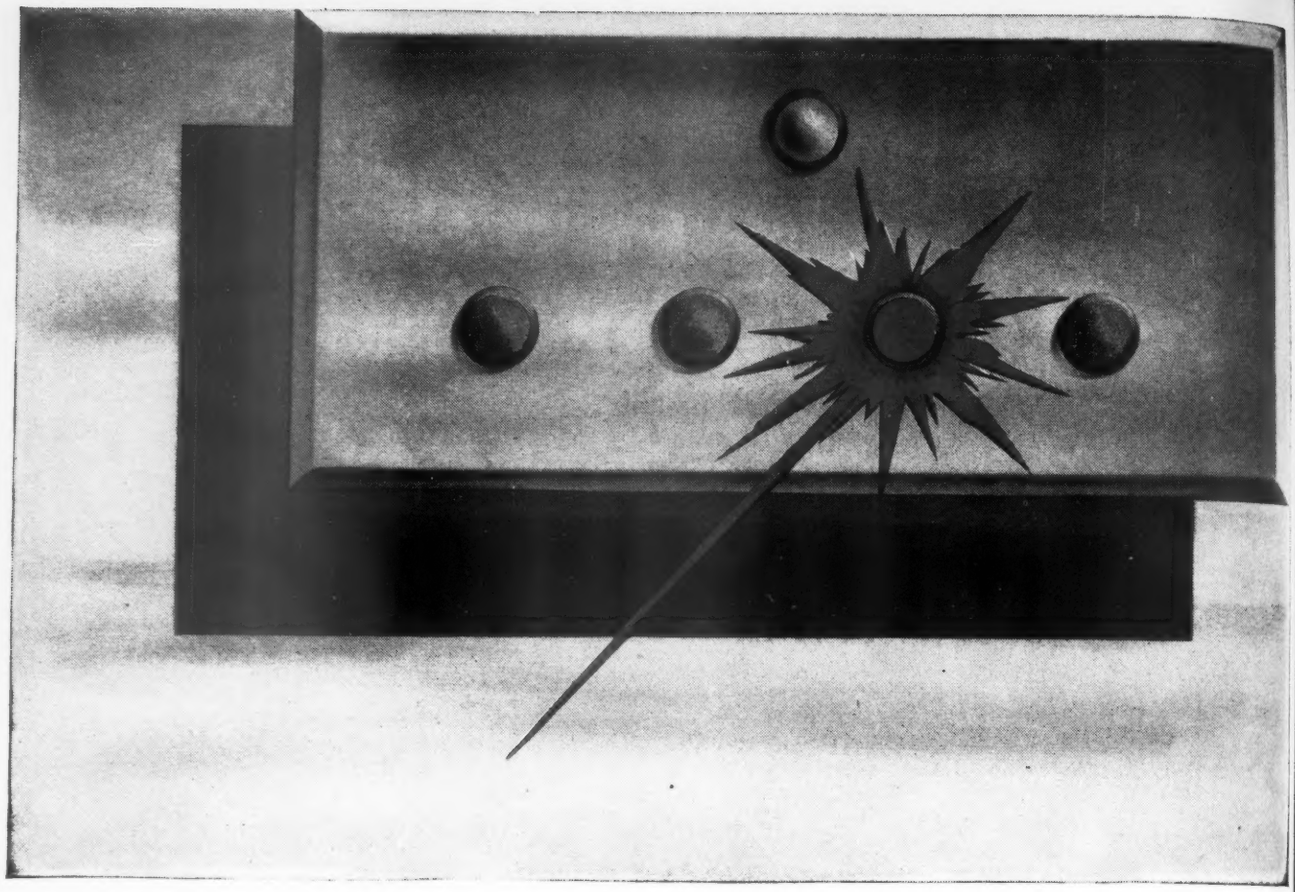

this new device keeps an *Electric Eye* on the bearings

The Westinghouse-Union Hot Bearing Detector brings an important new safeguard to passenger equipment. It solves the problem of hot bearing detection.

Any undue rise in the temperature of an individual bearing is immediately detected and reported—by red light to the train crew, by signal whistle to the engineer—BEFORE any damage results.

The device disregards temperature fluctuations due to weather and operating conditions; only the abnormal, threatening rise causes it to react.

Leaflet No. 2464 gives the complete story of principle and operation. We will be glad to send you a copy.

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